

RECEIVED JUNE 23, 2008

Analytical Data Package Prepared For

**Fluor Hanford**

Radiochemical Analysis By

**TestAmerica TARL****2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.**Data Package Contains      Pages

Report Nbr: 39341

**RECEIVED**  
JUL 28 2008  
**EDMC**

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05392	108-023	BIT3L4	J8E010326-1	KME2Q1AA	9KME2Q10	8134494
		BIT3L5	J8E010326-2	KME2T1AA	9KME2T10	8134494
		B1VC18	J8E010329-1	KME2V1AA	9KME2V10	8134497
		B1VC18	J8E010329-1	KME2V1AC	9KME2V10	8134482
		B1VC18	J8E010329-1	KME2V1AD	9KME2V10	8134483
		B1VC19	J8E010329-2	KME201AA	9KME2010	8134497
		B1VC19	J8E010329-2	KME201AC	9KME2010	8134482
		B1VC19	J8E010329-2	KME201AD	9KME2010	8134483
		B1VC21	J8E010329-3	KME221AA	9KME2210	8134497
		B1VC21	J8E010329-3	KME221AC	9KME2210	8134482
		B1VC21	J8E010329-3	KME221AD	9KME2210	8134483
		B1VC29	J8E010329-4	KME271AA	9KME2710	8134497
		B1VC29	J8E010329-4	KME271AC	9KME2710	8134482
		B1VC29	J8E010329-4	KME271AD	9KME2710	8134483
		B1TW29	J8E050200-1	KMKW31AA	9KMKW310	8126529
	108-032					

Comments:

## Report Nbr: 39341

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05392	I08-032	B1TW29	J8E050200-1	KMKW31AC	9KMKW310	8134497
		B1TW29	J8E050200-1	KMKW31AD	9KMKW310	8134482
		B1TW29	J8E050200-1	KMKW31AE	9KMKW310	8134483
		B1TW29	J8E050200-1	KMKW31AJ	9KMKW310	8134490
		B1TWH4	J8E050216-1	KMK2R1AA	9KMK2R10	8134497
		B1TWH4	J8E050216-1	KMK2R1AC	9KMK2R10	8134482
		B1TWH4	J8E050216-1	KMK2R1AD	9KMK2R10	8134483
		B1TWH4	J8E050216-1	KMK2R2AE	9KMK2R20	8161360
		B1TWH4	J8E050216-1	KMK2R2AF	9KMK2R20	8155308
		B1VC42	J8E050216-2	KMK211AA	9KMK2110	8134497
		B1VC42	J8E050216-2	KMK211AC	9KMK2110	8134482
		B1VC42	J8E050216-2	KMK211AD	9KMK2110	8134483
		B1TWJ2	J8E050216-3	KMK251AA	9KMK2510	8134497
		B1TWJ2	J8E050216-3	KMK251AC	9KMK2510	8134482
		B1TWJ2	J8E050216-3	KMK251AD	9KMK2510	8134483
		B1TWJ2	J8E050216-3	KMK251AE	9KMK2510	8134494
W08-004	I08-032	B1TX06	J8E050216-4	KMK3R1AA	9KMK3R10	8134497
		B1TX06	J8E050216-4	KMK3R1AC	9KMK3R10	8134482
		B1TX06	J8E050216-4	KMK3R1AD	9KMK3R10	8134483
		B1TX06	J8E050216-4	KMK3R1AE	9KMK3R10	8134494
		B1TX06	J8E050216-4	KMK3R1AF	9KMK3R10	8134492
		B1V122	J8E050219-1	KMK361AA	9KMK3610	8134499
		B1V122	J8E050219-1	KMK361AC	9KMK3610	8134496
		B1TW23	J8E070109-1	KMNC51AA	9KMNC510	8134492
		B1VC57	J8E070111-1	KMNC81AA	9KMNC810	8134497
		B1VC57	J8E070111-1	KMNC81AD	9KMNC810	8134492
I08-036	I08-036					

Comments:



## Report Nbr: 39341

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W05392	I08-036 S08-004	B1VC57	J8E070111-1	KMNC82AC	9KMNC820	8161360
		B1TWY8	J8E070113-1	KMNDE1AA	9KMNDE10	8134494
		B1TWY8	J8E070113-1	KMNDE1AC	9KMNDE10	8134492
		B1TWR1	J8E070113-2	KMNDG1AA	9KMNDG10	8134491
		B1TWR1	J8E070113-2	KMNDG1AC	9KMNDG10	8134492
		B1TX39	J8E070113-3	KMNDL1AA	9KMNDL10	8134497
		B1TX39	J8E070113-3	KMNDL1AC	9KMNDL10	8134482
		B1TX39	J8E070113-3	KMNDL1AD	9KMNDL10	8134483
		B1TX39	J8E070113-3	KMNDL1AE	9KMNDL10	8134493
		B1TX39	J8E070113-3	KMNDL1AG	9KMNDL10	8134496
		B1TX39	J8E070113-3	KMNDL2AF	9KMNDL20	8155308
		B1TWF3	J8E070115-1	KMNE1AA	9KMNE10	8134497
		B1TWF3	J8E070115-1	KMNE1AC	9KMNE10	8134482
		B1TWF3	J8E070115-1	KMNE1AD	9KMNE10	8134483
		B1TWF3	J8E070115-1	KMNE2AF	9KMNE20	8155308
		B1TWF3	J8E070115-1	KMNE3AE	9KMNE30	8161360
		B1TWF4	J8E070115-2	KMNE31AA	9KMNE310	8134497
		B1TWF4	J8E070115-2	KMNE31AC	9KMNE310	8134482
		B1TWF4	J8E070115-2	KMNE31AD	9KMNE310	8134483
		B1TWF4	J8E070115-2	KMNE32AE	9KMNE320	8161360
		B1TWF4	J8E070115-2	KMNE32AF	9KMNE320	8155308
		B1TWF0	J8E070115-3	KMNE61AA	9KMNE610	8134482
		B1TWF0	J8E070115-3	KMNE61AC	9KMNE610	8134483
		B1TWF0	J8E070115-3	KMNE61AE	9KMNE610	8134492
		B1TWF0	J8E070115-3	KMNE62AD	9KMNE620	8161360
		B1TWF0	J8E070115-3	KMNE62AF	9KMNE620	8155308

Comments:

## Certificate of Analysis

Fluor Hanford  
1200 Jadwin Ave.  
Richland, WA 99352

June 20, 2008

Attention: Steve Trent

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SAF Number	:	I08-023, I08-025, I08-032, S08-004, W08-004 I08-036,
Date SDG Closed	:	May 6, 2008
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W05392
Data Deliverable	:	45-Day / Summary

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## CASE NARRATIVE

### I. Introduction

Between May 1, 2008 and May 6, 2008 twenty water samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Fluor Hanford specific IDs:

<u>PGW ID#</u>	<u>STLR ID#</u>	<u>DATE OF RECEIPT</u>	<u>MATRIX</u>
B1T3L4	KME2Q	5/01/08	WATER
B1T3L5	KME2T	5/01/08	WATER
B1VC18	KME2V	5/01/08	WATER
B1VC19	KME20	5/01/08	WATER
B1VC21	KME22	5/01/08	WATER
B1VC29	KME27	5/01/08	WATER
B1TW29	KMKW3	5/05/08	WATER
B1TWH4	KMK2R	5/05/08	WATER
B1VC42	KMK21	5/05/08	WATER
B1TWJ2	KMK25	5/05/08	WATER
B1TX06	KMK3R	5/05/08	WATER
B1V122	KMK36	5/05/08	WATER
B1W23	KMNC5	5/06/08	WATER



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B1VC57	KMNC8	5/06/08	WATER
B1TWY8	KMNDE	5/06/08	WATER
B1TWR1	KMNDG	5/06/08	WATER
B1TX39	KMNDL	5/06/08	WATER
B1TWF3	KMNEL	5/06/08	WATER
B1TWF4	KMNE3	5/06/08	WATER
B1TWF0	KMNE6	5/06/08	WATER

## II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

## III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

### Gas Proportional Counting

Gross Alpha by method RICH-RC-5014

Gross Beta by method RICH-RC-5014

Strontium-90 by method RICH-RC-5006

### Gamma Spectroscopy

Gamma Spec (LL) by method RICH-RC-5017

Gamma Spec by method RICH-RC-5017

Iodine-129 (LL) by method RICH-RC-5025

Iodine-129 by method RICH-RC-5025

### Liquid Scintillation Counting

Technetium-99 by TEVA method RICH-RC-5065

Technetium-99 by method RICH-RC-5078

Tritium by method RICH-RC-5007

Carbon-14 by method RICH-RC-5022

### Laser Induced Phosphorimetry

Total Uranium by method RICH-RC-5058

### Chemical Analysis

Hexavalent Chromium by EPA method 7196A

## IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

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**V. Comments**

**Gas Proportional Counting**

Gross Alpha by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1VC18) results are within contractual requirements.

Gross Beta by method RICH-RC-5014:

The LCS, batch blank, samples and sample duplicate (B1VC19) results are within contractual requirements.

Strontium-90 by method RICH-RC-5006

The LCS, batch blank, samples and sample duplicate (B1TW23) results are within contractual requirements.

**Gamma Spectroscopy**

Gamma Spec (LL) by method RICH-RC-5017:

There was insufficient volume for a duplicate. Sample B1TWR1 was recounted on a different detector for the duplicate (B1TWR1 DUP). Except as noted, the LCS, batch blank, sample and sample duplicate (B1TWR1) results are within contractual requirements.

Gamma Spec by method RICH-RC-5017:

There was insufficient volume for a duplicate. Sample B1TW29 was recounted on a different detector for the duplicate (B1TW29 DUP). Except as noted, the LCS, batch blank, sample and sample duplicate (B1TW29) results are within contractual requirements.

Iodine-129 (LL) by method RICH-RC-5025:

The LCS, batch blank, samples and sample duplicate (B1T3L4) results are within contractual requirements.

Iodine-129 by method RICH-RC-5025:

The LCS, batch blank, sample and sample duplicate (B1TX39) results are within contractual requirements.

**Liquid Scintillation Counting**

Technetium-99 by TEVA method RICH-RC-5065:

The samples had to be recounted because the TSIE was out; the recount data is acceptable. Except as noted, the LCS, batch blank, samples, sample duplicate (B1TWF4), and sample matrix spike (B1TWF0) results are within contractual requirements.

Technetium-99 by method RICH-RC-5078:

The LCS, batch blank, samples, sample duplicate (B1V122), and sample matrix spike (B1V122) results are within contractual requirements.



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Tritium by method RICH-RC-5007:

The LCS, batch blank, samples and sample duplicate (B1VC57) results are within contractual requirements.

Carbon-14 by method RICH-RC-5022:

Sample B1TWF3 and the sample duplicate (B1TWF3 DUP) was recounted but, still did not show sufficient agreement. The entire batch was reanalyzed with acceptable results. Except as noted, the LCS, batch blank, samples and sample duplicate (B1TWF3) results are within contractual requirements.

**Total Uranium**

Total Uranium by method RICH-RC-5058:

The LCS, batch blank, samples, sample duplicate (B1TX39), and sample matrix spike (B1V122) results are within contractual requirements.

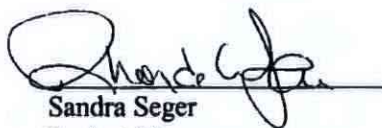
**Chemical Analysis**

Hexavalent Chromium by EPA method 7196A

The LCS, batch blank, sample, sample duplicate (B1TW29), sample matrix spike (B1TW29), and matrix spike duplicate (B1TW29) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Sandra Seger  
Project Manager

for

## Drinking Water Method Cross References

DRINKING WATER ASTM METHOD CROSS REFERENCES		
Referenced Method	Isotope(s)	TestAmerica Richland's SOP No.
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 00-02	Gross Alpha (Coprecipitation)	RICH-RC-5021
EPA 903.0	Total Alpha Radium (Ra-226)	RICH-RC-5027
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr-89/90	RICH-RC-5006
ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007

**Results in this report relate only to the sample(s) analyzed.**

### Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship,  $R = \text{constants} * f(x, y, z, \dots)$ . The components (x, y, z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties ( $u_i$ ) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty ( $u_c$ ) multiplied by the coverage factor (1, 2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value ( $S/\sqrt{n}$ ), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.



## Report Definitions

<b>Action Lev</b>	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
<b>Batch</b>	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
<b>Bias</b>	Defined by the equation $(\text{Result}/\text{Expected}) - 1$ as defined by ANSI N13.30.
<b>COC No</b>	Chain of Custody Number assigned by the Client or TestAmerica.
<b>Count Error (#s)</b>	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
<b>Total Uncert (#s) <math>u_c</math> - Combined Uncertainty.</b>	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, $u_c$ the combined uncertainty. The uncertainty is absolute and in the same units as the result.
<b>(#s), Coverage Factor</b>	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
<b>CRDL (RL)</b>	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
<b>Lc</b>	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. $Lc = (1.645 * \text{Sqrt}(2 * (\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin})) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$ . For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
<b>Lot-Sample No</b>	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
<b>MDC/MDA</b>	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. $MDC = (4.65 * \text{Sqrt}((\text{BkgndCnt}/\text{BkgndCntMin})/\text{SCntMin}) + 2.71/\text{SCntMin}) * (\text{ConvFct}/(\text{Eff} * \text{Yld} * \text{Abn} * \text{Vol})) * \text{IngrFct}$ . For LSC methods the batch blank is used as a measure of the background variability.
<b>Primary Detector</b>	The instrument identifier associated with the analysis of the sample aliquot.
<b>Ratio U-234/U-238</b>	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
<b>Rst/MDC</b>	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Rst/TotUcert</b>	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
<b>Report DB No</b>	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
<b>RER</b>	The equation Replicate Error Ratio = $(S-D)/[\text{sqrt}(\text{TPUs}^2 + \text{TPUd}^2)]$ as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
<b>SDG</b>	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
<b>Sum Rpt Alpha Spec Rst(s)</b>	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
<b>Work Order</b>	The LIMS software assign test specific identifier.
<b>Yield</b>	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39341 File Name: h:\Reportdb\dd\Fead\IVRad\W05392.Edd, h:\Reportdb\dd\Fead\IVRad\39341.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2010	B1VC19		MW6-SBB-A1	I08-025	W05392						05/01/2008 10:38				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	4.81E+02	pCi/L	1.2E+02	1.4E+02		2.52E+02	100.0	906.0_H3_LSC	05/01/2008 10:38	5.00E-03	L	05/30/2008 04:23	I
8134482	ALPHA	12587-46-1	8.46E-01	pCi/L	7.9E-01	8.1E-01	U	1.19E+00	100.0	9310_ALPHABETA	06/10/2008 14:15	2.002E-01	L	06/10/2008 14:15	I
8134483	BETA	12587-47-2	4.05E+00	pCi/L	1.6E+00	1.7E+00		2.90E+00	100.0	9310_ALPHABETA	06/10/2008 14:29	2.003E-01	L	06/10/2008 14:29	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2210	B1VC21		MW6-SBB-A1	I08-025	W05392						05/01/2008 11:40				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	2.53E+03	pCi/L	1.8E+02	2.2E+02		2.54E+02	100.0	906.0_H3_LSC	05/01/2008 11:40	5.00E-03	L	05/30/2008 05:46	I
8134482	ALPHA	12587-46-1	1.78E+00	pCi/L	1.3E+00	1.3E+00		1.62E+00	100.0	9310_ALPHABETA	06/10/2008 14:15	2.001E-01	L	06/10/2008 14:15	I
8134483	BETA	12587-47-2	7.22E+00	pCi/L	1.7E+00	2.0E+00		2.68E+00	100.0	9310_ALPHABETA	06/10/2008 14:29	2.002E-01	L	06/10/2008 14:29	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2710	B1VC29		MW6-SBB-A1	I08-025	W05392						05/01/2008 12:23				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	1.22E+03	pCi/L	1.5E+02	1.7E+02		2.53E+02	100.0	906.0_H3_LSC	05/01/2008 12:23	5.00E-03	L	05/30/2008 07:08	I
8134482	ALPHA	12587-46-1	2.22E+00	pCi/L	1.4E+00	1.4E+00		1.47E+00	100.0	9310_ALPHABETA	06/10/2008 14:15	2.001E-01	L	06/10/2008 14:15	I
8134483	BETA	12587-47-2	5.38E+00	pCi/L	1.6E+00	1.7E+00		2.59E+00	100.0	9310_ALPHABETA	06/10/2008 14:29	2.00E-01	L	06/10/2008 14:29	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2Q10	B1T3L4		MW6-SBB-A1	I08-023	W05392						04/29/2008 08:00				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
8134494	I-129L	15046-84-1	1.66E-02	pCi/L	1.4E-01	1.4E-01	U	2.69E-01	88.9	1129LL_SEP_LEPS	04/29/2008 08:00	3.8702E+00	L	06/05/2008 17:48	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2T10	B1T3L5		MW6-SBB-A1	I08-023	W05392						04/29/2008 08:00				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
8134494	I-129L	15046-84-1	3.41E-02	pCi/L	1.2E-01	1.2E-01	U	2.44E-01	89.7	1129LL_SEP_LEPS	04/29/2008 08:00	3.884E+00	L	06/05/2008 17:50	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	MDA	TrcYield	Distilled Volume	Sample On Date:	Alq Size	Unit	Analy Date/Time	Act
9KME2V10	B1VC18		MW6-SBB-A1	I08-025	W05392						05/01/2008 09:16				

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39341 File Name: h:\Reportdb\dd\Fead\VRad\W05392.Edd, h:\Reportdb\dd\Fead\VRad\39341.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	2.15E+03	pCi/L	1.7E+02	2.1E+02		2.52E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 03:01	I
8134482	ALPHA	12587-46-1	1.21E+00	pCi/L	1.0E+00	1.1E+00	U	1.55E+00	100.0	9310_ALPHABETA	2.00E-01	L	06/10/2008 14:15	I
8134483	BETA	12587-47-2	4.76E+00	pCi/L	1.7E+00	1.8E+00		3.05E+00	100.0	9310_ALPHABETA	2.003E-01	L	06/10/2008 14:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMK2110	B1VC42		MW6-SBB-A1	S08-004	W05392					05/05/2008 12:24				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	1.11E+03	pCi/L	1.4E+02	1.6E+02		2.52E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 11:14	I
8134482	ALPHA	12587-46-1	1.91E+00	pCi/L	1.2E+00	1.3E+00		1.44E+00	100.0	9310_ALPHABETA	2.001E-01	L	06/10/2008 15:17	I
8134483	BETA	12587-47-2	1.96E+01	pCi/L	2.5E+00	3.5E+00		3.00E+00	100.0	9310_ALPHABETA	2.001E-01	L	06/10/2008 14:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KMK2510	B1TWJ2		MW6-SBB-A1	S08-004	W05392					05/05/2008 11:01				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	-1.09E+01	pC/L	1.0E+02	1.1E+02	U	2.53E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 12:36	I
8134482	ALPHA	12587-46-1	1.51E+00	pC/L	1.1E+00	1.1E+00		1.39E+00	100.0	9310_ALPHABETA	1.852E-01	L	06/10/2008 15:17	I
8134483	BETA	12587-47-2	8.18E+00	pC/L	1.9E+00	2.1E+00		2.86E+00	100.0	9310_ALPHABETA	2.003E-01	L	06/10/2008 14:29	I
8134494	I-129L	15046-84-1	-1.12E-01	pC/L	1.3E-01	1.3E-01	U	2.11E-01	90.8	I129LL_SEP_LEPS	3.8101E+00	L	06/05/2008 19:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KMK2R10	B1TWH4		MW6-SBB-A1	S08-004	W05392					05/05/2008 11:33				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	3.72E+03	pCi/L	2.1E+02	2.7E+02		2.52E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 09:52	I
8134482	ALPHA	12587-46-1	1.14E+00	pCi/L	9.0E-01	9.3E-01	U	1.29E+00	100.0	9310_ALPHABETA	2.002E-01	L	06/10/2008 15:17	I
8134483	BETA	12587-47-2	7.23E+00	pCi/L	1.7E+00	2.1E+00		2.74E+00	100.0	9310_ALPHABETA	2.003E-01	L	06/10/2008 14:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KMK2R20	B1TWH4		MW6-SBB-A1	S08-004	W05392					05/06/2008 12:34				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8161360	C-14	14762-75-5	2.18E+02	pC/L	8.1E+00	1.2E+01		8.20E+00	100.0	C14_LSC	2.00E-01	L	06/16/2008 21:51	I
8155308	TC-99	14133-76-7	5.21E+00	pC/L	4.2E+00	6.1E+00	U	9.88E+00	100.0	TC99_ETVDSK_LS	1.2532E-01	L	06/04/2008 06:43	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:
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TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual - Analyte was found in the associated laboratory blank above the MDC.



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R	FormatType: FEAD	Version: 05	Rpt Nbr: 39341	File Name: h:\Reportdb\dd\Fead\IVRad\W05392.Edd, h:\Reportdb\dd\Fead\IVRad\39341.Edd
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CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
14133-76-7	2.61E+00	pCi/L	4.3E+00	6.1E+00	U	9.89E+00	100.0	TC99_SEP_LSC	1.2552E-01	L	06/13/2008 02:33	I
7440-61-1	2.31E+00	ug/L	2.4E-01	2.4E-01		8.15E-02		UTOT_KPA	2.57E-02	ML	06/12/2008 14:47	I

Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*	Distilled Volume	Sample On Date:	Collection Date:
MW6-SBB-A1	S08-004	W05392					05/05/2008 13:07	

CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
10028-17-8	3.59E+03	pCi/L	2.1E+02	2.6E+02		2.54E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 13:57	I
12587-46-1	9.40E-01	pCi/L	1.1E+00	1.1E+00	U	1.83E+00	100.0	9310_ALPHABETA	1.85E-01	L	06/10/2008 15:17	I
12587-47-2	1.76E+02	pCi/L	6.3E+00	2.3E+01		2.75E+00	100.0	9310_ALPHABETA	2.00E-01	L	06/10/2008 14:29	I
15046-84-1	3.38E+00	pCi/L	6.2E-01	6.2E-01		3.27E-01	96.2	1129LL_SEP_LEPS	3.8575E+00	L	06/05/2008 19:58	I
10098-97-2	2.90E-01	pCi/L	5.0E-01	5.0E-01	U	1.04E+00	53.9	SRISO SEP PRE	1.0025E+00	L	06/15/2008 06:00	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
9KMKW310	B1TW29		MW6-SBB-A1	I08-032	W05392					05/05/2008 10:15				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	1.53E+02	pCi/L	1.1E+02	1.2E+02	U	2.53E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 08:30	I
8134482	ALPHA	12587-46-1	1.77E+00	pCi/L	1.2E+00	1.3E+00		1.39E+00	100.0	9310_ALPHABETA	1.723E-01	L	06/10/2008 14:15	I
8134483	BETA	12587-47-2	6.75E+00	pCi/L	1.7E+00	2.0E+00		2.80E+00	100.0	9310_ALPHABETA	2.002E-01	L	06/10/2008 14:29	I
8134490	BE-7	13966-02-4	-5.59E+00	pCi/L	1.4E+01	1.4E+01	U	2.36E+01		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	CO-60	10198-40-0	-2.61E-01	pCi/L	1.5E+00	1.5E+00	U	2.70E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	CS-134	13967-70-9	-2.12E-01	pCi/L	1.5E+00	1.5E+00	U	2.62E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	CS-137	10045-97-3	-8.03E-01	pCi/L	1.3E+00	1.3E+00	U	2.23E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	EU-152	14683-23-9	2.00E+00	pCi/L	3.5E+00	3.5E+00	U	6.47E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	EU-154	15585-10-1	-9.71E-02	pCi/L	4.4E+00	4.4E+00	U	7.99E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	EU-155	14391-16-3	4.08E-01	pCi/L	2.3E+00	2.3E+00	U	4.01E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	K-40	13966-00-2	-2.34E+01	pCi/L	3.3E+01	3.3E+01	U	6.38E+01		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	RU-106	13967-48-1	-7.49E+00	pCi/L	1.3E+01	1.3E+01	U	2.21E+01		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I
8134490	SB-125	14234-35-6	-1.36E+00	pCi/L	3.2E+00	3.2E+00	U	5.41E+00		GAMMA_GS	2.5006E+00	L	06/05/2008 09:16	I

**TestAmerica**

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
B Qual- Analyte was found in the associated laboratory blank above the MDC.

3



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39341 File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Batch	Sample Id:	Client	Analyte	CAS#	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%*	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134492	SR-90			10098-97-2		-9.46E-02	pCi/L	5.9E-01	5.9E-01	U	1.27E+00	60.7	SRISO_SEP_PRE	1.0007E+00	L	06/15/2008 06:00	I
Collection Date: 05/06/2008 12:46																	
9KMNC810	B1VC57					MW6-SBB-A1	I08-036	W05392									
Batch	Sample Id:	Client	Analyte	CAS#	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%*	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3			10028-17-8		6.38E+03	pCi/L	2.6E+02	3.7E+02	U	2.52E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 19:25	I
8134492	SR-90			10098-97-2		1.62E-01	pCi/L	3.9E-01	3.9E-01	U	8.12E-01	66.9	SRISO_SEP_PRE	1.0017E+00	L	06/15/2008 06:01	I
Collection Date: 05/06/2008 12:46																	
9KMNC820	B1VC57					MW6-SBB-A1	I08-036	W05392									
Batch	Sample Id:	Client	Analyte	CAS#	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%*	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8161360	C-14			14762-75-5		1.09E+01	pCi/L	3.8E+00	4.5E+00	U	8.20E+00	100.0	C14_LSC	2.00E-01	L	06/16/2008 22:34	I
Collection Date: 05/06/2008 09:24																	
9KMNCDE10	B1TWY8					MW6-SBB-A1	S08-004	W05392									
Batch	Sample Id:	Client	Analyte	CAS#	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%*	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134494	I-129L			15046-84-1		1.62E+00	pCi/L	3.4E-01	3.4E-01	U	2.30E-01	96.8	I129LL_SEP_LEPS	3.8906E+00	L	06/05/2008 19:59	I
8134492	SR-90			10098-97-2		9.89E-03	pCi/L	9.4E-02	4.2E-01	U	8.95E-01	76.2	SRISO_SEP_PRE	1.0003E+00	L	06/15/2008 06:01	I
Collection Date: 05/06/2008 12:34																	
9KMNDG10	B1TWR1					MW6-SBB-A1	S08-004	W05392									
Batch	Sample Id:	Client	Analyte	CAS#	Test User	Contract Nbr	SAF Nbr	Sdg Nbr	QC Type	Moisture/ Solids%*	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134491	BE-7			13966-02-4		1.15E+01	pCi/L	1.7E+01	1.7E+01	U	3.18E+01		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	CO-60			10198-40-0		1.10E+00	pCi/L	1.6E+00	1.6E+00	U	3.38E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	CS-134			13967-70-9		1.60E+00	pCi/L	2.1E+00	2.1E+00	U	4.03E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	CS-137			10045-97-3		-4.79E-01	pCi/L	1.6E+00	1.6E+00	U	2.77E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	EU-152			14683-23-9		-1.96E-01	pCi/L	4.3E+00	4.3E+00	U	7.38E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	EU-154			15585-10-1		-1.80E+00	pCi/L	4.4E+00	4.4E+00	U	7.88E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	EU-155			14391-16-3		-1.27E-02	pCi/L	3.2E+00	3.2E+00	U	5.46E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	K-40			13966-00-2		4.04E+01	pCi/L	4.3E+01	4.3E+01	U	3.32E+01		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	RU-106			13967-48-1		-2.97E+00	pCi/L	1.6E+01	1.6E+01	U	2.72E+01		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134491	SB-125			14234-35-6		2.53E+00	pCi/L	3.9E+00	3.9E+00	U	7.31E+00		GAMMALL_GS	2.0005E+00	L	06/05/2008 09:18	I
8134492	SR-90			10098-97-2		6.39E-02	pCi/L	3.0E-01	3.0E-01	U	6.59E-01	64.4	SRISO_SEP_PRE	1.0001E+00	L	06/15/2008 06:01	I

TestAmerica

rpt\FeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39341 File Name: h:\Reportdb\edd\Fead\IVRad\W05392.Edd, h:\Reportdb\edd\Fead\IVRad\39341.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMNDL10	B1TX39		MW6-SBB-A1	S08-004	W05392					05/06/2008 12:34				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	1.31E+02	pCi/L	1.1E+02	1.2E+02	U	2.54E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 22:09	I
8134482	ALPHA	12587-46-1	5.11E-01	pCi/L	7.4E-01	7.5E-01	U	1.43E+00	100.0	9310_ALPHABETA	2.002E-01	L	06/10/2008 15:17	I
8134483	BETA	12587-47-2	8.62E+00	pCi/L	1.9E+00	2.4E+00	U	2.87E+00	100.0	9310_ALPHABETA	2.001E-01	L	06/10/2008 14:29	I
8134493	I-129L	15046-84-1	-1.42E-01	pCi/L	9.0E-01	9.0E-01	U	1.66E+00	97.0	1129_SEP_LEPS_G5.001E-01		L	06/06/2008 05:33	I
8134496	Uranium	7440-61-1	2.88E+00	ug/L	2.9E-01	2.9E-01	U	8.12E-02		UTOT_KPA	2.58E-02	ML	06/12/2008 14:52	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMNDL20	B1TX39		MW6-SBB-A1	S08-004	W05392					05/06/2008 11:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8155308	TC-99	14133-76-7	5.03E-01	pCi/L	4.1E+00	5.8E+00	U	9.85E+00	100.0	TC99_ETVDSK_LS	1.2589E-01	L	06/04/2008 07:46	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMNE310	B1TWF4		MW6-SBB-A1	S08-004	W05392					05/06/2008 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	3.80E+01	pCi/L	1.1E+02	1.2E+02	U	2.64E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/31/2008 00:52	I
8134482	ALPHA	12587-46-1	-9.12E-02	pCi/L	2.2E-01	2.2E-01	U	9.24E-01	100.0	9310_ALPHABETA	2.003E-01	L	06/10/2008 16:52	I
8134483	BETA	12587-47-2	2.92E-01	pCi/L	1.3E+00	1.3E+00	U	2.76E+00	100.0	9310_ALPHABETA	2.004E-01	L	06/10/2008 14:29	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMNE320	B1TWF4		MW6-SBB-A1	S08-004	W05392					05/06/2008 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8161360	C-14	14762-75-5	5.37E+00	pCi/L	3.6E+00	4.3E+00	U	8.20E+00	100.0	C14_LSC	2.00E-01	L	06/17/2008 00:42	I
8155308	TC-99	14133-76-7	-6.36E+00	pCi/L	3.8E+00	5.4E+00	U	9.84E+00	100.0	TC99_ETVDSK_LS	1.2567E-01	L	06/04/2008 09:51	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:				
9KMNE610	B1TWF0		MW6-SBB-A1	S08-004	W05392					05/06/2008 10:25				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134482	ALPHA	12587-46-1	2.34E+00	pCi/L	1.2E+00	1.3E+00	U	1.32E+00	100.0	9310_ALPHABETA	2.001E-01	L	06/10/2008 16:52	I
8134483	BETA	12587-47-2	5.77E+00	pCi/L	1.7E+00	1.8E+00	U	2.87E+00	100.0	9310_ALPHABETA	2.002E-01	L	06/10/2008 14:29	I
8134492	SR-90	10098-97-2	2.94E-02	pCi/L	1.5E-01	2.9E-01	U	6.45E-01	68.6	SRISO_SEP_PRE	1.0002E+00	L	06/15/2008 06:01	I

TestAmerica

rpt\FeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



6/19/2008 5:37:32 PM

## TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 39341 File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
99KMNE620	B1TWF0		MW6-SBB-A1	S08-004	W05392					05/06/2008 10:25				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8161360	C-14	14762-75-5	2.78E+03	pCi/L	2.6E+01	1.1E+02		8.20E+00	100.0	C14_LSC	2.00E-01	L	06/17/2008 01:25	I
8155308	TC-99	14133-76-7	-6.71E-01	pCi/L	4.0E+00	5.7E+00	U	9.88E+00	100.0	TC99_ETVDSK_LS	1.2505E-01	L	06/04/2008 11:56	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
99KMNEL10	B1TWF3		MW6-SBB-A1	S08-004	W05392					05/06/2008 11:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8134497	H-3	10028-17-8	8.86E+04	pCi/L	8.8E+02	3.4E+03		2.53E+02	100.0	906.0_H3_LSC	5.00E-03	L	05/30/2008 23:30	I
8134482	ALPHA	12587-46-1	1.86E+00	pCi/L	1.1E+00	1.2E+00		1.09E+00	100.0	9310_ALPHABETA	2.00E-01	L	06/10/2008 15:17	I
8134483	BETA	12587-47-2	6.97E+00	pCi/L	1.8E+00	2.0E+00		2.99E+00	100.0	9310_ALPHABETA	2.00E-01	L	06/10/2008 14:29	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
99KMNEL20	B1TWF3		MW6-SBB-A1	S08-004	W05392					05/06/2008 07:30				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8155308	TC-99	14133-76-7	-5.21E-01	pCi/L	4.0E+00	5.7E+00	U	9.83E+00	100.0	TC99_ETVDSK_LS	1.2579E-01	L	06/04/2008 08:49	I
Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%:	Distilled Volume	Sample On Date:	Collection Date:				
99KMNEL30	B1TWF3		MW6-SBB-A1	S08-004	W05392					05/06/2008 11:03				
Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
8161360	C-14	14762-75-5	5.33E+03	pCi/L	3.6E+01	2.0E+02		8.20E+00	100.0	C14_LSC	2.00E-01	L	06/16/2008 23:16	I

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\ledd\Fead\VRad\W05392.Edd, h:\Reportdb\ledd\Fead\VRad\39341.Edd

Lab Sample Id: KM5G01HN

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:46

Client Id: INTRA-LAB BL

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

Received Date: 05/06/2008

QC Type:

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BL	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spt Concl/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8134497	H-3	1.24E+03	pCi/L	1.1E+02			100.0		906.0_H3_LSC	5.00E-03	05/31/2008				D
	10028-17-8			1.0E+02							02:14				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05392.Edd, h:\Reportdb\edd\Fead\IVRad\39341.Edd

Lab Sample Id: KM5F81AB

Sdg/Rept Nbr: W05392

Collection Date: 05/05/2008 10:15

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BB	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134490 BE-7		5.90E-01	pCi/L	1.3E+01	U	2.33E+01			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 13966-02-4				1.3E+01						L					
8134490 CO-80		3.70E-01	pCi/L	1.3E+00	U	2.63E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 10198-40-0				1.3E+00						L					
8134490 CS-134		-5.55E-01	pCi/L	1.3E+00	U	2.15E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 13967-70-9				1.3E+00						L					
8134490 CS-137		-6.60E-03	pCi/L	1.3E+00	U	2.40E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 10045-97-3				1.3E+00						L					
8134490 EU-152		-2.09E+00	pCi/L	3.2E+00	U	5.34E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 14683-23-9				3.2E+00						L					
8134490 EU-154		1.24E+00	pCi/L	3.5E+00	U	7.02E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 15585-10-1				3.5E+00						L					
8134490 EU-155		1.79E+00	pCi/L	2.3E+00	U	4.24E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 14391-16-3				2.3E+00						L					
8134490 K-40		-5.13E+01	pCi/L	2.6E+01	U	4.76E+01			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 13966-00-2				2.6E+01						L					
8134490 RU-106		-5.83E+00	pCi/L	1.3E+01	U	2.16E+01			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 13967-48-1				1.3E+01						L					
8134490 SB-125		-1.17E+00	pCi/L	3.2E+00	U	5.40E+00			GAMMA_GS	2.5006E+00	06/05/2008 09:17				D
BLK 14234-35-6				3.2E+00						L					

TestAmerica

rpt\FeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KM5FT1AB

Sdg/Rept Nbr: W05392

Collection Date: 05/01/2008 09:16

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BD	H

Batch # /  
Qc Type  
8134482 ALPHA  
BLK 12587-46-1

Result/  
Orig Rst  
6.95E-02

Unit  
pCi/L 2.9E-01  
Tot/Cnt  
Uncert 2S  
2.9E-01

Qu-  
al U 7.95E-01  
MDC 100.0

Tracer  
Yield 100.0

Analy  
Method 9310\_ALPHA  
Spk Conc/  
%Rec 2.002E-01

Date/Time  
Analyzed 06/10/2008  
16:52

RPD/  
UCL UCL  
RER/  
UCL UCL  
LCS  
LCL/UCL  
Type  
D

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5FV1AB      Sdg/Rept Nbr: W05392      39341      Collection Date: 05/01/2008 10:38

Client Id: NA      Matrix: WATER      WATER      Sample On Date:

Moisture/Solids%\*:      QC Type: BLK      Received Date: 05/01/2008

SAF Nbr      Contract Nbr      Test User      Case Nbr      SAS Nbr      Suffix      Decant      Distilled Volume      File Id      FSuffix      RTyp

                 MW6-SBB-A19981

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spt Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LC/UCL	R Typ
8134483	BETA	6.08E-01	pCi/L	1.2E+00	U	2.55E+00	100.0		9310_ALPHA	2.005E-01	06/10/2008				D
BLK	12587-47-2			1.2E+00						L	14:29				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\99341.Edd

Lab Sample Id: KM5G01AB

Sdg/Rept Nbr: W05392 39341

Collection Date: 05/06/2008 12:46

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/06/2008

SAF Nbr Contract Nbr  
MW6-SBB-A19981Test User Case Nbr SAS Nbr Suffix Decant Distilled Volume File Id FSuffix RType  
BH H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134497	H-3	-2.99E+01	pCi/L	1.1E+02	U	2.52E+02	100.0		906.0_H3_LSC	5.00E-03	05/30/2008				D
BLK	10028-17-8			1.0E+02						L	16:41				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5G01DX

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/06/2008 12:46

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BJ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/CL	R Typ
8134497	H-3	4.06E+01	pCi/L	1.2E+02	U	2.66E+02	100.0		906.0_H3_LSC	5.00E-03	05/30/2008				D
BLK	10028-17-8			1.1E+02						L	00:16				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5GD1AB      Sdg/Rept Nbr: W05392      39341      Collection Date: 05/06/2008 12:34

Client Id: NA      Matrix: WATER      WATER      Sample On Date:

Moisture/Solids%\*:      QC Type: BLK      Received Date: 05/06/2008

Batch # / Qc Type	Analyt/ CAS#	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
		MW6-SBB-A19981								BM	H
8134491	BE-7		Unit	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	RPD/ UCL	R LCS LCL/UCL
			Result/ Orig Rst	Tot/Cnt Uncert 2S							Type
8134491	BLK 13966-02-4		-9.95E+00	1.3E+01	U	2.16E+01		GAMMALL_GS	2.0005E+00	06/05/2008	D
				1.3E+01							
8134491	CO-60		-1.24E-01	1.1E+00	U	2.02E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				1.1E+00							
8134491	BLK 10198-40-0		-4.76E-01	1.4E+00	U	2.40E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				1.4E+00							
8134491	CS-134		4.47E-01	1.2E+00	U	2.29E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				1.2E+00							
8134491	BLK 13967-70-9		-7.20E-01	3.5E+00	U	5.98E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				3.5E+00							
8134491	EU-152		3.86E-01	3.2E+00	U	6.01E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				3.2E+00							
8134491	BLK 14683-23-9		-2.13E-02	2.9E+00	U	5.03E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				2.9E+00							
8134491	EU-155		-1.17E+01	2.1E+01	U	3.89E+01		GAMMALL_GS	2.0005E+00	06/05/2008	D
				2.1E+01							
8134491	BLK 14391-16-3		1.48E+00	1.2E+01	U	2.24E+01		GAMMALL_GS	2.0005E+00	06/05/2008	D
				1.2E+01							
8134491	K-40		-1.23E+00	3.3E+00	U	5.69E+00		GAMMALL_GS	2.0005E+00	06/05/2008	D
				3.3E+00							
8134491	BLK 13966-00-2										
8134491	RU-106										
8134491	BLK 13967-48-1										
8134491	SB-125										
8134491	BLK 14234-35-6										

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\139341.Edd

Lab Sample Id: KM5GE1AB

Sdg/Rept Nbr: W05392      39341

Collection Date: 05/06/2008 11:03

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
8134492	MW6-SBB-A19981								BO	H
BLK	10098-97-2									

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	REP/ UCL	LCS	R
8134492	SR-90	-2.79E-02	pCi/L	2.9E-01	U	6.53E-01	70.7		SRISO_SEP_P	1.0002E+00	06/15/2008				
BLK				2.9E-01						L	06:01				D

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

8

Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KM5GK1AB

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BQ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Qu- al	MDC	Tracer Yield	Spt Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Typ
8134493	I-129L	-4.06E-01	pCi/L	8.5E-01	U	1.47E+00	98.1		I129_SEP_LEP	5.003E-01	06/06/2008				D
BLK	15046-84-1			8.5E-01						L	07:18				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5GM1AB

Sdg/Rept Nbr: W05392

39341

Collection Date: 04/29/2008 08:00

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/01/2008

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType				
8134494	I-129L	5.58E-02	pCi/L	1.2E-01	U	2.32E-01	98.1	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
BLK	15046-84-1			1.2E-01						I129LL_SEP_L	3.9901E+00	06/06/2008				D
											L	05:32				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

10

Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\139341.Edd

Lab Sample Id: KM5GV1AB

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/06/2008

SAF Nbr Contract Nbr  
MW6-SBB-A19981

Test User

Case Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RType  
BU HBatch # /  
Qc Type  
8134496 Uranium  
BLK 7440-61-1Result/  
Orig Rst  
5.06E-02Unit  
ug/L 7.8E-03  
7.8E-03Tot/Cnt  
Uncert 2S  
U 8.38E-02

MDC

Tracer  
YieldSpk Concl/  
%RecAnaly  
Method  
UTOT\_KPAAliq  
Size/  
2.50E-02  
MLDate/Time  
Analyzed  
06/12/2008  
14:40RPD/  
UCL  
RER/  
UCLLCS R  
LCL/UCL Type  
D

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

11



Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5HC1AB

Sdg/Rept Nbr: W05392 39341

Collection Date: 05/05/2008 11:01

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BLK

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BX	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134499	TC-99	-1.19E+00	pCi/L	5.9E+00	U	9.87E+00	100.0		TC99_SEP_LS	1.2518E-01	06/13/2008				D
BLK	14133-76-7			4.1E+00						L	02:33				

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

12





Thursday, June 19, 2008

## TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KPLMH1AB

Client Id: NA

Moisture/Solids%\*:

Sdg/Rept Nbr: W05392

Matrix: WATER

QC Type: BLK

39341

Collection Date: 05/05/2008 11:33

Sample On Date:

Received Date: 05/05/2008

SAF Nbr Contract Nbr  
MW6-SBB-A19981

Test User

Case Nbr

SAS Nbr

Suffix

Decant

Distilled Volume

File Id

FSuffix RType  
CQ HBatch # /  
Qc Type  
8161360 C-14  
BLKAnalyt/  
CAS#  
C-14Result/  
Orig Rst  
6.26E-01Unit  
pCi/LTot/Cnt  
Uncert 2S  
4.1E+00  
3.4E+00MDC  
8.20E+00  
100.0Tracer  
Yield  
100.0Spk Concl/  
%Rec  
C14\_LSCAliq  
Size/  
2.00E-01  
LDate/Time  
Analyzed  
06/16/2008  
20:26RPD/  
UCL  
RER/  
UCL  
LCS  
LCL/UCL  
Type  
D

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

14

Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Feed\VARad\W05392.Edd, h:\Reportdb\edd\Feed\VARad\39341.Edd

Lab Sample Id: KM5F81CS

Sdg/Rept Nbr: W05392 39341

Collection Date: 05/05/2008 10:15

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BC	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134490 BS	CO-60 10198-40-0	3.27E+01	pCi/L	6.7E+00 6.7E+00	3.05E+00	3.05E+01 107.4		3.05E+01 107.4	GAMMA_GS	2.5019E+00	06/05/2008 09:17			75 125	D
8134490 BS	CS-137 10045-97-3	4.40E+01	pCi/L	7.2E+00 7.2E+00	3.60E+00	3.60E+01 111.0		3.97E+01 111.0	GAMMA_GS	2.5019E+00	06/05/2008 09:17			70 130	D
8134490 BS	EU-152 14883-23-9	6.18E+01	pCi/L	1.2E+01 1.2E+01	U	1.60E+01		6.06E+01 102.0	GAMMA_GS	2.5019E+00	06/05/2008 09:17			70 130	D

TestAmerica

rptFeedRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KM5FT1CS

Sdg/Rept Nbr: W05392      39341

Collection Date: 05/01/2008 09:16

Client Id: NA

Matrix: WATER      WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								BE	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R	LCL/UCL	Typ
8134482	ALPHA	1.92E+01	pCi/L	4.8E+00		8.84E-01	100.0	2.26E+01	9310_ALPHA	2.002E-01	06/10/2008			70		D
BS	12587-46-1			2.8E+00				85.0		L	16:52			130		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

16

Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5FV1CS

Sdg/Rept Nbr: W05392

Collection Date: 05/01/2008 10:38

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BG	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Toi/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134483	BETA	2.55E+01	pCi/L	4.7E+00	3.26E+00	100.0	9310_ALPHA	2.003E-01	06/10/2008	14:29	70	D			
BS	12587-47-2			2.8E+00				113.3							

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5G01CS

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:46

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
									BI	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8134497 H-3	2.24E+03	2.24E+03	pCi/L	2.1E+02	1.7E+02	2.52E+02	100.0	2.71E+03	906.0 H3_LSC	5.00E-03	05/30/2008	75	75	75	D
BS 10028-17-8								82.5		L	18:03				125

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

/8

Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5G01EM

Client Id: NA

Moisture/Solids%\*:

Sdg/Rept Nbr: W05392

Matrix: WATER

QC Type: BS

Collection Date: 05/06/2008 12:46

Sample On Date:

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								BK	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS R	LCL/UCL Typ
8134497 H-3		2.27E+03	pCi/L	2.1E+02 1.8E+02		2.63E+02	100.0	2.71E+03 83.7	906.0_H3_LSC	5.00E-03	05/30/2008 01:39			75 125	D
BS	10028-17-8														

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KM5GD1CS      Sdg/Rept Nbr: W05392      39341      Collection Date: 05/06/2008 12:34

Client Id: NA      Matrix: WATER      WATER      Sample On Date:

Moisture/Solids%\*:      QC Type: BS      Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
	MW6-SBB-A19981								BN	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134491 BS	CO-60 10198-40-0	4.03E+01	pCi/L	6.9E+00 6.9E+00	2.98E+00			3.81E+01 105.9	GAMMALL_GS	2.0002E+00	06/05/2008 09:18			75	D
8134491 BS	CS-137 10045-97-3	4.92E+01	pCi/L	8.0E+00 8.0E+00	3.45E+00			4.96E+01 99.2	GAMMALL_GS	2.0002E+00	06/05/2008 09:18			70	D
8134491 BS	EU-152 14683-23-9	7.14E+01	pCi/L	1.4E+01 1.4E+01	7.85E+00			7.59E+01 94.2	GAMMALL_GS	2.0002E+00	06/05/2008 09:18			70	D
										L				130	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.

J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).

B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KM5GE1CS

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/06/2008 11:03

Client Id: NA

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BP	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Ret	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS	R
8134492	SR-90	1.46E+01	pCi/L	2.3E+00	6.73E-01	74.8		1.35E+01	SRISO_SEP_P	1.0004E+00	06/15/2008			70	D
BS	10098-97-2			8.7E-01				107.6		L	06:01			130	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

21



Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fea\I\Rad\W05392.Edd, h:\Reportdb\edd\Fea\I\Rad\39341.Edd

Lab Sample Id: KM5GK1CS

Sdg/Rept Nbr: W05392 39341

Collection Date: 05/06/2008 12:34

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr Contract Nbr  
MW6-SBB-A19981Test User Case Nbr SAS Nbr Suffix Decant Distilled Volume File Id FSuffix RType  
BR H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134493	I-129L	4.70E+01	pCi/L	6.1E+00	2.04E+00	98.1	4.52E+01	103.9	I129_SEP_LEP	5.002E-01	06/06/2008	07:18	70	130	D
BS	15046-84-1			6.1E+00											

TestAmerica

rptFeaRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5GM1CS

Sdg/Rept Nbr: W05392

Collection Date: 04/29/2008 08:00

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/01/2008

SAF Nbr      Contract Nbr  
MW6-SBB-A19981

Distilled Volume

File Id

FSuffix    RType  
BT    H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134494	I-129L	9.21E+00	pCi/L	1.1E+00		2.88E-01	98.4	9.65E+00	I129LL_SEP_L	3.9885E+00	06/06/2008			70	D
BS	15046-84-1			1.1E+00				95.5		L	05:32			130	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KM5GV1CS

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCS/UCL	R Type
8134496	Uranium	3.48E+01	ug/L	4.1E+00		8.38E-02		3.61E+01	UTOT_KPA	2.50E-02	06/12/2008			75	D
BS	7440-61-1			4.1E+00				96.3		ML	14:44			125	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Feed\VRad\W05392.Edd, h:\Reportdb\edd\Feed\VRad\39341.Edd

Lab Sample Id: KM5GV1DS

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								BW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134496	Uranium	3.29E+00	ug/L	3.4E-01		8.32E-02		3.57E+00	UTOT_KPA	2.52E-02	06/12/2008			75	D
BS	7440-61-1			3.4E-01				92.0		ML	14:45			125	

TestAmerica

rptFeedRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Feed\VARad\W05392.Edd, h:\Reportdb\edd\Feed\VARad\39341.Edd

Lab Sample Id: KM5HC1CS

Sdg/Rept Nbr: W05392

Collection Date: 05/05/2008 11:01

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
									BY	H					
Batch # / Qc Type 8134499 TC-99 BS	Analyt/ CAS# 14133-76-7	Result/ Orig Rat 5.12E+02	Unit pCi/L	Tot/Cnt Uncert 2S 3.6E+01 1.3E+01	Qu- al	MDC 9.90E+00	Tracer Yield 100.0	Spt Concl/ %Rec 5.40E+02 94.7	Analy Method TC99_SEP_LS	Aliq Size/ 1.2558E-01 L	Date/Time Analyzed 06/13/2008 02:33	RPD/ UCL	RER/ UCL	LCS UCL	R Type D
														70	130

TestAmerica

rptFeedRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\I\Rad\W05392.Edd, h:\Reportdb\edd\Fead\I\Rad\99341.Edd

Lab Sample Id: KM5HD2CS

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 07:30

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								CA	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8155308	TC-99	5.20E+02	pCi/L	3.7E+01	9.83E+00	100.0	5.44E+02	95.5	TC99_ETVDSK	1.2533E-01	06/04/2008	15:04	75	125	D
BS	14133-76-7			1.3E+01						L					

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KPLMH1CS

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/05/2008 11:33

Client Id: NA

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: BS

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp					
	MW6-SBB-A19981								CR	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8161360 BS	C-14 14762-75-5	4.55E+01	pCi/L	5.8E+00 4.8E+00		8.20E+00	100.0	4.75E+01 95.8	C14_LSC	2.00E-01	06/16/2008			70	D
											21:09			130	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KME201ER

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/01/2008 10:38

Client Id: B1VC19

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
108-025	MW6-SBB-A19981								CB	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134483	BETA	7.33E+00	pCi/L	2.0E+00		2.74E+00	100.0		9310_ALPHA	2.00E-01	06/10/2008	57.7	2.3		D
DUP	12587-47-2	4.05E+00		1.7E+00							14:29	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KME2Q1CR

Sdg/Rept Nbr: W05392 39341

Collection Date: 04/29/2008 08:00

Client Id: B1T3L4

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
I08-023	MW6-SBB-A19981								CC	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Allq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134494	I-129L	6.09E-02	pCi/L	1.4E-01	U	2.69E-01	94.6		I129LL_SEP_L	3.8783E+00	06/05/2008	114.2	0.5		D
DUP	15046-84-1	1.66E-02		1.4E-01						L	17:49	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fea\IVRad\W05392.Edd, h:\Reportdb\edd\Fea\IVRad\39341.Edd

Lab Sample Id: KME2V1ER

Sdg/Rept Nbr: W05392

Collection Date: 05/01/2008 09:16

Client Id: B1VC18

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/01/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
									CD	H					
108-025	MW6-SBB-A19981														
Batch # /	Analyt/	Result/	Unit	Tot/Cnt	Qu-	MDC	Tracer	Spk Conc/	Analy	Aliq	Date/Time	RPD/	RER/	LCS	R
Qc Type	CAS#	Orig Ret	pCi/L	Uncert 2S	al		Yield	%Rec	Method	Size/	Analyzed	UCL	UCL	LCU/UCL	Type
8134482	ALPHA	1.56E+00		1.2E+00	U	1.56E+00	100.0		9310_ALPHA	2.00E-01	06/10/2008	25.2	0.4		D
DUP	12587-46-1	1.21E+00		1.1E+00						L	14:15	20.0	3		

TestAmerica

rptFeaRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KMK361FR      Sdg/Rept Nbr: W05392      39341      Collection Date: 05/05/2008 11:01

Client Id: B1V122      Matrix: WATER      WATER      Sample On Date:

Moisture/Solids%\*:      QC Type: DUP      Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
W08-004	MW6-SBB-A19981								CG	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134499	TC-99	3.01E+00	pCi/L	6.1E+00	U	9.89E+00	100.0		TC99_SEP_LS	1.2545E-01	06/13/2008	14.0	0.1		D
DUP	14133-76-7	2.61E+00		4.3E+00						L	02:33	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KMKW31KR

Sdg/Rept Nbr: W05392 39341

Collection Date: 05/05/2008 10:15

Client Id: B1TW29

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/05/2008

SAF Nbr		Contract Nbr		Test User		Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix		RType	
I08-032		MW6-SBB-A19981										CH	H		
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qual	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134490 BE-7		-3.44E+00	pCi/L	8.3E+00	U	1.41E+01			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	0.4		D
DUP	13966-02-4	-5.59E+00		8.3E+00						L		20.0	3		
8134490 CO-60		3.66E-02	pCi/L	1.0E+00	U	1.89E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	0.4		D
DUP	10198-40-0	-2.61E-01		1.0E+00						L		20.0	3		
8134490 CS-134		2.02E-02	pCi/L	8.5E-01	U	1.57E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	0.4		D
DUP	13967-70-9	-2.12E-01		8.5E-01						L		20.0	3		
8134490 CS-137		1.02E+00	pCi/L	8.3E-01	U	1.66E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	1681.0	3.1		D
DUP	10045-97-3	-8.03E-01		8.3E-01						L		20.0	3		
8134490 EU-152		-2.90E-01	pCi/L	1.9E+00	U	3.34E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	267.8	1.7		D
DUP	14683-23-9	2.00E+00		1.9E+00						L		20.0	3		
8134490 EU-154		3.65E-01	pCi/L	2.3E+00	U	4.44E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	345.2	0.3		D
DUP	15585-10-1	-9.71E-02		2.3E+00						L		20.0	3		
8134490 EU-155		-5.18E-01	pCi/L	1.6E+00	U	2.81E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	0.8		D
DUP	14391-16-3	4.08E-01		1.6E+00						L		20.0	3		
8134490 K-40		1.26E+01	pCi/L	2.0E+01	U	1.51E+01			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	2.6		D
DUP	13966-00-2	-2.34E+01		2.0E+01						L		20.0	3		
8134490 RU-106		-7.65E-02	pCi/L	7.9E+00	U	1.41E+01			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	1.3		D
DUP	13967-48-1	-7.49E+00		7.9E+00						L		20.0	3		
8134490 SB-125		8.47E-02	pCi/L	1.9E+00	U	3.49E+00			GAMMA_GS	2.5006E+00	06/05/2008 12:44	0.0	1.1		D
DUP	14234-35-6	-1.36E+00		1.9E+00						L		20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KMNC51CR

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 11:03

Client Id: B1TW23

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
108-032	MW6-SBB-A19981								CI	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ L	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134492	SR-90	-2.52E-02	pCi/L	3.4E-01	U	7.49E-01	70.2		SRISO_SEP_P	9.9416E-01	06/15/2008	0.0	0.3		D
DUP	10098-97-2	-9.46E-02		3.4E-01							06:00	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KMNC81ER

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:46

Client Id: B1VC57

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
108-036	MW6-SBB-A19981								CJ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8134497	H-3	6.00E+03	pCi/L	3.6E+02		2.52E+02	100.0		906.0_H3_LSC	5.00E-03	05/30/2008	6.2	1.5		D
DUP	10028-17-8	6.38E+03		2.5E+02						L	20:47	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\dd\Fead\VRad\W05392.Edd, h:\Reportdb\dd\Fead\VRad\39341.Edd

Lab Sample Id: KMNDG1DR      Sdg/Rept Nbr: W05392      39341      Collection Date: 05/06/2008 12:34

Client Id: B1TWR1      Matrix: WATER      WATER      Sample On Date:

Moisture/Solids%\*:      QC Type: DUP      Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
S08-004	MW6-SBB-A19981								CK	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UCL	R Type
8134491 BE-7	3.23E+00	1.15E+01	pCi/L	1.4E+01	U	2.65E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	112.6	0.8		D
DUP	13966-02-4	1.15E+01	pCi/L	1.4E+01	U	2.65E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 CO-60	-7.63E-01	1.10E+00	pCi/L	1.5E+00	U	2.53E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	1100.3	1.8		D
DUP	10198-40-0	1.10E+00	pCi/L	1.5E+00	U	2.53E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 CS-134	9.86E-01	1.60E+00	pCi/L	1.6E+00	U	3.15E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	47.6	0.5		D
DUP	13967-70-9	1.60E+00	pCi/L	1.6E+00	U	3.15E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 CS-137	-8.05E-01	-4.79E-01	pCi/L	1.5E+00	U	2.49E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	0.0	0.3		D
DUP	10045-97-3	-4.79E-01	pCi/L	1.5E+00	U	2.49E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 EU-152	-4.04E+00	-1.96E-01	pCi/L	3.6E+00	U	5.58E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	0.0	1.5		D
DUP	14683-23-9	-1.96E-01	pCi/L	3.6E+00	U	5.58E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 EU-154	-5.72E+00	-1.80E+00	pCi/L	4.3E+00	U	6.01E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	0.0	1.3		D
DUP	15585-10-1	-1.80E+00	pCi/L	4.3E+00	U	6.01E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 EU-155	1.52E+00	-1.27E-02	pCi/L	2.7E+00	U	4.89E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	203.4	0.8		D
DUP	14391-16-3	-1.27E-02	pCi/L	2.7E+00	U	4.89E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 K-40	2.21E+01	4.04E+01	pCi/L	2.3E+01	U	4.74E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	58.5	1.1		D
DUP	13966-00-2	4.04E+01	pCi/L	2.3E+01	U	4.74E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 RU-106	1.41E+00	-2.97E+00	pCi/L	1.4E+01	U	2.47E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	0.0	0.4		D
DUP	13967-48-1	-2.97E+00	pCi/L	1.4E+01	U	2.47E+01			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D
8134491 SB-125	1.32E-01	2.53E+00	pCi/L	3.0E+00	U	5.45E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	180.1	1.1		D
DUP	14234-35-6	2.53E+00	pCi/L	3.0E+00	U	5.45E+00			GAMMALL_GS	2.0005E+00	06/05/2008 12:44	20.0	3		D

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VI\Rad\W05392.Edd, h:\Reportdb\edd\Fead\VI\Rad\39341.Edd

Lab Sample Id: KMNDL1HR

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: B1TX39

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
S08-004	MW6-SBB-A19981								CL	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Qu- al	MDC	Tracer Yield	Spk Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8134493	I-129L	-3.87E-01	pCi/L	9.1E-01	U	1.61E+00	99.7		I129_SEP_LEP	5.001E-01	06/06/2008	0.0	0.4		D
DUP	15048-84-1	-1.42E-01		9.1E-01						L	07:16	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\38341.Edd

Lab Sample Id: KMNDL1JR

Sdg/Rept Nbr: W05392

Collection Date: 05/06/2008 12:34

Client Id: B1TX39

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
S08-004	MW6-SBB-A19981								CM	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ ML	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCU/UC	R Type
8134496	Uranium	2.87E+00	ug/L	2.9E-01		8.12E-02			UTOT_KPA	2.58E-02	06/12/2008	.6	0.1		D
DUP	7440-61-1	2.88E+00		2.9E-01							14:54	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Feed\VRad\W05392.Edd, h:\Reportdb\edd\Feed\VRad\39341.Edd

Lab Sample Id: KMNE32GR

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/04/2008 10:25

Client Id: B1TWF4

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType						
									CN	H						
S08-004	MW6-SBB-A19981															
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Uncert 2S	Qu- al	MDC	Tracer Yield	Spt Concl/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8155308	TC-99	-5.25E+00	pCi/L	5.4E+00	U	9.81E+00	100.0	100.0		TC99_ETVDSK	1.2577E-01	06/04/2008	0.0	0.3		D
DUP	14133-76-7	-6.36E+00		3.8E+00							L	10:54	20.0	3		

TestAmerica

rptFeedRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\IVRad\W05392.Edd, h:\Reportdb\edd\Fead\IVRad\39341.Edd

Lab Sample Id: KMNEL3GR

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/06/2008 11:03

Client Id: B1TWF3

Matrix: WATER

WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: DUP

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType					
S08-004	MW6-SBB-A19981								CP	H					
Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/ 2.00E-01	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Type
8161360	C-14	5.36E+03	pCi/L	2.0E+02	8.20E+00	100.0			C14_LSC	L	06/16/2008	.5	0.2		D
DUP	14762-75-5	5.33E+03		3.7E+01							23:59	20.0	3		

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R      FormatType: FEAD      VersionNbr: 05      File Name: h:\Reportdb\edd\Fead\VRad\W05392.Edd, h:\Reportdb\edd\Fead\VRad\39341.Edd

Lab Sample Id: KMK361DW

Sdg/Rept Nbr: W05392

Collection Date: 05/05/2008 11:01

Client Id: B1V122

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
W08-004	MW6-SBB-A19981								CE	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Ret	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
8134496	Uranium	3.69E+01	ug/L	4.4E+00		8.12E-02		3.52E+01	UTOT_KPA	2.58E-02	06/12/2008			60	D
MS	7440-61-1			4.4E+00				104.9		ML	14:49			140	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

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Thursday, June 19, 2008

## TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KMK361EW

Sdg/Rept Nbr: W05392

Collection Date: 05/05/2008 11:01

Client Id: B1V122

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 05/05/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
W08-004	MW6-SBB-A19981								CF	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu- al	MDC	Tracer Yield	Spt Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	REF/ UCL	LCS LCU/UCL	R Type
8134499	TC-99	3.29E+03	pCi/L	2.0E+02	9.89E+00	100.0	100.0	3.63E+03	TC99_SEP_LS	1.2514E-01	06/13/2008	60	60	60	D
MS	14133-76-7			3.1E+01				90.8		L	02:33			140	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.

Thursday, June 19, 2008

## TestAmerica Qc Matrix Spike Report

Lab Code: TARL

FormNbr: R

FormatType: FEAD

VersionNbr: 05

File Name: h:\Reportdb\edd\Fead\VARad\W05392.Edd, h:\Reportdb\edd\Fead\VARad\39341.Edd

Lab Sample Id: KMNE62GW

Sdg/Rept Nbr: W05392

39341

Collection Date: 05/06/2008 07:30

Client Id: B1TWFO

Matrix: WATER

Sample On Date:

Moisture/Solids%\*:

QC Type: MS

Received Date: 05/06/2008

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	R1Typ
S08-004	MW6-SBB-A19981								CO	H


Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt	Uncert 2S	Qu- al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCS/UCL	R Typ
8155308	TC-99	3.46E+03	pCi/L	2.1E+02	3.2E+01	9.80E+00	100.0	100.0	3.59E+03	TC99_ETVDSK	1.2563E-01	06/04/2008 12:59			60	D
MS	14133-76-7								96.6		L				140	

TestAmerica

rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.  
 J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).  
 B Qual- Analyte was found in the associated laboratory blank above the MDC.



Analyst:		L. Dinh		Calibration Curve Information				SOP Information		BATCH # 8126529	
Start Date:		5/5/2008		Amount		Conc. (mg/L)		RICH-WC-5003		SDG #	
Start Time:		15:00		Blank		0.000		Revision 7		Matrix	
End Date:		5/5/2008		Std. 1		0.100				Water	
End Time		16:00		Std. 2		0.500					
				Std. 3		0.750					
				Std. 4		1.500					
				Std 5		2.000					
				Standard Volume (mL):		1.000					
				Date of Curve:		5/5/2008					
Analyst Signature:											
Date:		5/5/08									

**Lot No., Due Date:** J8E010329, J8E050216, J8E050200, J8E070113, J8E070115; 06/20/2008  
**Client, Site:** 384868; PGW 615 HANFORD HANFORD  
**QC Batch No., Method Test:** 8134482; RALPHA-A Alpha by GPC-Am  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

☒ Yes ☐ No ☐ N/A

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

☒ Yes ☐ No ☐ N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

☒ Yes ☐ No ☐ N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

☒ Yes ☐ No ☐ N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

☒ Yes ☐ No ☐ N/A

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

☒ Yes ☐ No ☐ N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

☒ Yes ☐ No ☐ N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

☒ Yes ☐ No ☐ N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

☒ Yes ☐ No ☐ N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

☒ Yes ☐ No ☐ N/A

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

☒ Yes ☐ No ☐ N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

☒ Yes ☐ No ☐ N/A

4.3 Were Yields entered correctly? Yes No N/A

☒ Yes ☐ No ☐ N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

☒ Yes ☐ No ☐ N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

☒ Yes ☐ No ☐ N/A

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

☒ Yes ☐ No ☐ N/A

5.2 Are all required forms filled out? Yes No N/A

☒ Yes ☐ No ☐ N/A

5.3 Was the correct methodology used? Yes No N/A

☒ Yes ☐ No ☐ N/A

5.4 Was transcription checked? Yes No N/A

☒ Yes ☐ No ☐ N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

☒ Yes ☐ No ☐ N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

☒ Yes ☐ No ☐ N/A

6.0 Comments on any No response:

First Level Review

Date

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 7134482

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Eide Date: 4/11/18



**Lot No., Due Date:** J8E010329,J8E050216,J8E050200,J8E070113,J8E070115; 06/20/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8134483; RBETA-SR Beta by GPC-Sr/Y  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

*John Horton*

Date

6-11-8

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134483

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Erika [Signature] Date: 6/11/18



**Lot No., Due Date:** J8E050216,J8E070109,J8E070111,J8E070113,J8E070115; 06/20/2008

**Client, Site:** 384868; PGW 615HANFORD HANFORD

**QC Batch No., Method Test:** 8134492; RSR85907 Sr-85/90 by GPC-7

**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A  
☒
**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A  
☒

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A  
☒

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A  
☒

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A  
☒
**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A  
☒

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A  
☒

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A  
☒

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A  
☒

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A  
☒
**4.0 Raw Data**

4.1 Were results calculated in the correct units?

Yes No N/A  
☒

4.2 Were analysis volumes entered correctly?

Yes No N/A  
☒

4.3 Were Yields entered correctly?

Yes No N/A  
☒

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A  
☒

4.5 Were raw counts reviewed for anomalies?

Yes No N/A  
☒
**5.0 Other**

5.1 Are all nonconformances included and noted?

Yes No N/A  
☒

5.2 Are all required forms filled out?

Yes No N/A  
☒

5.3 Was the correct methodology used?

Yes No N/A  
☒

5.4 Was transcription checked?

Yes No N/A  
☒

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A  
☒

5.6 Are worksheet entries complete and correct?

Yes No N/A  
☒

6.0 Comments on any No response:

**First Level Review**

**Date**

6-16-8

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134492

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Erika J. [Signature] Date: 6/16/18

Lot No., Due Date: J8E070113; 06/20/2008  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 8134491; RGAMMA Gamma by GER  
SDG, Matrix: W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

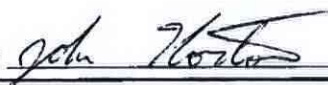
✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

First Level Review



Date

6-98

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134491

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

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Second Level Review: Erich J. Ord Date: 6/9/8



**Lot No., Due Date:** J8E050200; 06/20/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8134490; RGAMMA Gamma by GER  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A



**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A



2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A



2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A



2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A



**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A



3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A



3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A



3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A



3.5 Are the sample yields and MDAs within contract limits? Yes No N/A



**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A



4.2 Were analysis volumes entered correctly? Yes No N/A



4.3 Were Yields entered correctly? Yes No N/A



4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A



4.5 Were raw counts reviewed for anomalies? Yes No N/A



**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A



5.2 Are all required forms filled out? Yes No N/A



5.3 Was the correct methodology used? Yes No N/A



5.4 Was transcription checked? Yes No N/A



5.5 Were all calculations checked at a minimum frequency? Yes No N/A



5.6 Are worksheet entries complete and correct? Yes No N/A



6.0 Comments on any No response:

The sample was re-counted on a different detector for the duplicate.

First Level Review

*John North*

Date

6-6-8

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 814 8134490

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?			
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: Sample was counted on a different detector to act as the sample duplicate due to insufficient sample volume

Second Level Review: Erich Doro Date: 6/9/18



**Lot No., Due Date:** J8E010326, J8E050216, J8E070113; 06/20/2008

**Client, Site:** 384868; PGW 615 HANFORD HANFORD

**QC Batch No., Method Test:** 8134494; RGAMLEPS Gamma by LEPS

**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units?

Yes No N/A

✓

4.2 Were analysis volumes entered correctly?

Yes No N/A

✓

4.3 Were Yields entered correctly?

Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies?

Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted?

Yes No N/A

✓

5.2 Are all required forms filled out?

Yes No N/A

✓

5.3 Was the correct methodology used?

Yes No N/A

✓

5.4 Was transcription checked?

Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A

✓

5.6 Are worksheet entries complete and correct?

Yes No N/A

✓

6.0 Comments on any No response:

**First Level Review**

**Date**

6-9-8

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134494

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Second Level Review: Erika Jordan Date: 6/9/18

**Lot No., Due Date:** J8E070113; 06/20/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8134493; RGAMLEPS Gamma by LEPS  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

*John Horton*

Date

6-9-8



Lot No., Due Date: J8E010326, J8E050216, J8E070113; 06/20/2008

Client, Site: 384868; PGW 615HANFORD HANFORD

QC Batch No., Method Test: 8134494; RGAMLEPS Gamma by LEPS

SDG, Matrix: W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?

Yes No N/A  
✓**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?

Yes No N/A  
✓

2.2 Are the QC appropriate for the analysis included in the batch?

Yes No N/A  
✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?

Yes No N/A  
✓

2.4 Does the Worksheets include a Tracer Vial label for each sample?

Yes No N/A  
✓**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits?

Yes No N/A  
✓

3.2 Is the LCS result, yield, and MDA within contract limits?

Yes No N/A  
✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits?

Yes No N/A  
✓

3.4 Are the duplicate result, yields, and MDAs within contract limits?

Yes No N/A  
✓

3.5 Are the sample yields and MDAs within contract limits?

Yes No N/A  
✓**4.0 Raw Data**

4.1 Were results calculated in the correct units?

Yes No N/A  
✓

4.2 Were analysis volumes entered correctly?

Yes No N/A  
✓

4.3 Were Yields entered correctly?

Yes No N/A  
✓

4.4 Were spectra reviewed/meet contractual requirements?

Yes No N/A  
✓

4.5 Were raw counts reviewed for anomalies?

Yes No N/A  
✓**5.0 Other**

5.1 Are all nonconformances included and noted?

Yes No N/A  
✓

5.2 Are all required forms filled out?

Yes No N/A  
✓

5.3 Was the correct methodology used?

Yes No N/A  
✓

5.4 Was transcription checked?

Yes No N/A  
✓

5.5 Were all calculations checked at a minimum frequency?

Yes No N/A  
✓

5.6 Are worksheet entries complete and correct?

Yes No N/A  
✓

6.0 Comments on any No response:

First Level Review



Date

6-9-8

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134494

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Second Level Review: Erika Jordan Date: 6/9/18

Lot No., Due Date: J8E070113; 06/20/2008  
Client, Site: 384868; PGW 615HANFORD HANFORD  
QC Batch No., Method Test: 8134493; RGAMLEPS Gamma by LEPS  
SDG, Matrix: W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level Review

Date

6-9-8

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA

Page 1



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134493

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			
1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Second Level Review: Erich J. [Signature] Date: 6/19/15



**Lot No., Due Date:** J8E050216, J8E070113, J8E070115; 06/20/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8155308; RTC99 Tc-99 by LSC  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

Please see NCM # 10-12495

First Level Review

*John Hester*

Date

6-6-8

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8155308

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?			
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓		
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: See non

Second Level Review: Erika Jord

Date: 6/9/18

# Clouseau Nonconformance Memo

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: <b>10-12495</b>	Classification: <b>Anomaly</b>
NCM Initiated By: <b>John Norton</b>	Status: <b>CHREVIEW</b>
Date Opened: <b>06/06/2008</b>	Production Area: <b>Counting</b>
Date Closed:	Tests: <b>Tc-99 by LSC</b>
	Lot #'s (Sample #'s): <b>J8E050216 (1), J8E070113 (3), J8E070115 (1,2,3), J8E130000 (500),</b>
	QC Batches: <b>8134500,</b>
Nonconformance: <b>Other (describe in detail)</b>	
Subcategory: <b>Other (explanation required)</b>	

## Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
John Norton	06/06/2008	The results from this batch could not be calculated because the TSIE was outside of acceptable limits.

## Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
John Norton	06/06/2008	The scintillation vials were shaken and the batch was re-counted as batch # 8155308 for acceptable results.

## Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

## Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
		This section not yet completed by QA.	

## Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>
----------------------	--------------------	-----------------



**Lot No., Due Date:** J8E050219; 06/20/2008  
**Client, Site:** 384868; PGW 615HANFORD HANFORD  
**QC Batch No., Method Test:** 8134499; RTC99 Tc-99 by LSC  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A  
✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A  
✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A  
✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A  
✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A  
✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A  
✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A  
✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A  
✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A  
✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A  
✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A  
✓

4.2 Were analysis volumes entered correctly? Yes No N/A  
✓

4.3 Were Yields entered correctly? Yes No N/A  
✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A  
✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A  
✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A  
✓

5.2 Are all required forms filled out? Yes No N/A  
✓

5.3 Was the correct methodology used? Yes No N/A  
✓

5.4 Was transcription checked? Yes No N/A  
✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A  
✓

5.6 Are worksheet entries complete and correct? Yes No N/A  
✓

6.0 Comments on any No response:

**First Level Review**

**Date** 6-13-8

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134499

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓		
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Erika [Signature] Date: 6/13/18



**Lot No., Due Date:** J8E010329,J8E050216,J8E050200,J8E070111,J8E070113,J8E070115; 06/20/2008

**Client, Site:** 384868; PGW 615HANFORD HANFORD

**QC Batch No., Method Test:** 8134497; RTRITIUM H-3 by LSC

**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

*John Horton*

Date

6-6-8

TAL Richiand

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134497

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Eihe Jork Date: 6/9/18

Lot No., Due Date: J8E050216, J8E070111, J8E070115; 06/20/2008

Client, Site: 384868; PGW 615 HANFORD HANFORD

QC Batch No., Method Test: 8161360; RC14 C-14 by LSC

SDG, Matrix: W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

Please see NCM # 10-12542

First Level Review

Date

6-17-8

TAL Richland

QAS\_RADCALCv4.8.33

TESTAMERICA



## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8161360

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?		✓	
<b>C. Other</b>			
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: See run

Second Level Review: Quke Jod Date: 6/17/18



# Clouseau Nonconformance Memo

**TestAmerica**  
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-12542**  
NCM Initiated By: John Norton  
Date Opened: 06/17/2008  
Date Closed:

Classification: **Anomaly**  
Status: **GLREVIEW**  
Production Area: Environmental - Prep  
Tests: C-14 by LSC  
Lot #'s (Sample #'s): J8E050216 (1), J8E070111  
(1), J8E070115 (1,2,3),  
J8E130000 (481),  
QC Batches: 8134481,

Nonconformance: Dups not within acceptance limits  
Subcategory: Other (explanation required)

## Problem Description / Root Cause

<u>Name</u>	<u>Date</u>	<u>Description</u>
John Norton	06/17/2008	In batch # 134481 the sample and duplicate did not show sufficient agreement.

## Corrective Action

<u>Name</u>	<u>Date</u>	<u>Corrective Action</u>
John Norton	06/17/2008	When re-counting did not correct the problem the samples were re-analyzed in batch # 8161360.

## Client Notification Summary

<u>Client</u>	<u>Project Manager</u>	<u>Notified</u>	<u>Response</u>	<u>How Notified</u>	<u>Note</u>
			<u>Response</u>		<u>Response Note</u>

## Quality Assurance Verification

<u>Verified By</u>	<u>Due Date</u>	<u>Status</u>	<u>Notes</u>
		This section not yet completed by QA.	

## Approval History

<u>Date Approved</u>	<u>Approved By</u>	<u>Position</u>

**Lot No., Due Date:** J8E050219, J8E070113; 06/20/2008  
**Client, Site:** 384868; PGW 615 HANFORD HANFORD  
**QC Batch No., Method Test:** 8134496; RUNAT UNat by KPA  
**SDG, Matrix:** W05392; WATER

**1.0 COC**

1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions? Yes No N/A

✓

**2.0 QC Batch**

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

✓

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

✓

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

✓

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

✓

**3.0 QC & Samples**

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

✓

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

✓

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

✓

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

✓

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

✓

**4.0 Raw Data**

4.1 Were results calculated in the correct units? Yes No N/A

✓

4.2 Were analysis volumes entered correctly? Yes No N/A

✓

4.3 Were Yields entered correctly? Yes No N/A

✓

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

✓

4.5 Were raw counts reviewed for anomalies? Yes No N/A

✓

**5.0 Other**

5.1 Are all nonconformances included and noted? Yes No N/A

✓

5.2 Are all required forms filled out? Yes No N/A

✓

5.3 Was the correct methodology used? Yes No N/A

✓

5.4 Was transcription checked? Yes No N/A

✓

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

✓

5.6 Are worksheet entries complete and correct? Yes No N/A

✓

6.0 Comments on any No response:

First Level Review

*John North*

Date

6-20-8

TAL Richland

QAS\_RADCALCv4.8.03

TESTAMERICA

## Data Review Checklist

### RADIOCHEMISTRY

#### Second Level Review

Batch Number: 8134496

Review Item	Yes (✓)	No (✓)	NA (✓)
<b>A. Sample Analysis</b>			✓
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
<b>B. QC Samples</b>			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?	✓		
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
<b>C. Other</b>			✓
1. Are all Non-conformances included and noted?	✓		
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second Level Review: Erika Jord Date: 4/20/18



Richland Laboratory  
Data Review Check List  
Hexavalent Chromium

Batch Number(s): 8126529 J8E 050200 W045392				
Lab Sample Numbers or				
Method/Test/Parameter: Cr+6 in Water / RICH-WC-5003 6/26/08				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>A. Initial Calibration</b>	✓			
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
<b>B. Continuing Calibration</b>	✓			
1. CCV analyzed at required frequency and all parameters within QC limits?				✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
<b>C. Sample Analysis</b>	✓			
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?				✓
2. Were all sample holding times met?	✓			✓
<b>D. QC Samples</b>	✓			
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?			✓	✓
5. ICP only: One serial dilution performed per SDG?			✓	✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?			✓	✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>E. Other</b>	✓			
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response:

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Analyst: \_\_\_\_\_

Date: 5/5/08

Second-Level Review: \_\_\_\_\_

Date: 6/19/07









## Sample Check-in List

Date/Time Received: 05-01-08 1310 GM Screen Result -1  
Client: P&W SDG #: W05392 NA [ ] SAF #: I08-023 NA [ ]  
Work Order Number: J8E010326 Chain of Custody # I08-023-134,135  
Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]  
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]  
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]  
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]  
6. Number of samples in shipping container: 2  
7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]  
8. Samples have:  
    \_\_\_\_\_ Tape \_\_\_\_\_ Hazard Labels  
    \_\_\_\_\_ Custody Seals ☒ Appropriate Sample Labels  
9. Samples are:  
    ☒ In Good Condition \_\_\_\_\_ Leaking  
    \_\_\_\_\_ Broken \_\_\_\_\_ Have Air Bubbles  
    (Only for samples requiring no head space.)  
10. Sample pH taken? NA [ ] pH<2 [ ] pH>2 [ ] pH>9 ☒ Amount HNO<sub>3</sub> Added None  
11. Sample Location, Sample Collector Listed? \*  
    \*For documentation only. No corrective action needed.  
12. Were any anomalies identified in sample receipt? Yes [ ] No ☒  
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 5/1/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_









[illegible]



[illegible]





## Sample Check-in List

- Date/Time Received: 5/08 1355 GM Screen Result 0.1K  
Client: PGW SDG #: W05392 NA [ ] SAF #: I08-025 NA [ ]  
Work Order Number: JSE-010309 Chain of Custody # I08-025-215, -216, -218, -234  
Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_
1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]  
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]  
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]  
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]  
6. Number of samples in shipping container: 4  
7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]  
8. Samples have:  
    ☒ Tape Hazard Labels  
    ☒ Custody Seals Appropriate Sample Labels  
9. Samples are:  
    ☒ In Good Condition  
    \_\_\_\_\_ Broken  
    \_\_\_\_\_ Leaking  
    \_\_\_\_\_ Have Air Bubbles  
    (Only for samples requiring no head space.)  
10. Sample pH taken? NA [ ] pH < 2 ☒ pH > 2 ☒ pH > 9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_  
11. Sample Location, Sample Collector Listed? \*  
    \*For documentation only. No corrective action needed.  
12. Were any anomalies identified in sample receipt? Yes [ ] No ☒  
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian:  Date: 5/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_







## Sample Check-in List

Date/Time Received: 05/05/08 1545 GM Screen Result .07  
Client: P6W SDG #: W05392 NA [ ] SAF #: I08-032 NA [ ]  
Work Order Number: J8E050200 Chain of Custody # I08-032-79  
Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]  
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]  
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]  
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]  
6. Number of samples in shipping container: 1  
7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]  
8. Samples have:  
\_\_\_\_ Tape \_\_\_\_\_ Hazard Labels  
\_\_\_\_ Custody Seals \_\_\_\_\_ ☒ Appropriate Sample Labels  
9. Samples are:  
\_\_\_\_ ☒ In Good Condition \_\_\_\_\_ Leaking  
\_\_\_\_ Broken \_\_\_\_\_ Have Air Bubbles  
(Only for samples requiring no head space.)  
10. Sample pH taken? NA [ ] pH < 2 ☒ pH > 2 ☒ pH > 9 [ ] Amount HNO<sub>3</sub> Added NONE  
11. Sample Location, Sample Collector Listed? \*  
\*For documentation only. No corrective action needed.  
12. Were any anomalies identified in sample receipt? Yes [ ] No ☒  
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: S. Am. Uh Date: 05/05/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_



FLUOR HANFORD		C.O.C. #		S08-004-47	
J 8E050216		W05392		Due 06 19 08	
Collector: HAMAKER		Telephone No.		MSIN	
SAF No.		509-373-5869		FAX	
Project Title		Purchaser Order/Charge Code		Page 1 of 9	
S08-004		Ice Chest		Temp.	
S08-004		Bill of Lading/Air Bill No.			
S08-004		Offsite Property No.			
S08-004		Priority: 45 Days			
S08-004		SPECIAL INSTRUCTIONS		Hold Time	
S08-004		Site-Wide Generator Knowledge Information Form applies.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Sample No.	Lab ID	Date	Time	No/Type Container	Activity Scan	Sample Analysis	Preservative
B1TWH4		5-5-08	133	1x20-mL P	C14_LSC: C-14 (1)	None	
B1TWH4				2x1000-mL G/P	TC99_ETVDSK_LSC: Tc-99 (1)	None	
B1TWH4				1x500-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HCl to pH <2	
B1TWH4				1x1000-mL P	906.0_H3_LSC: Tritium (1)	HNO3 to pH <2	
B1TWH4				1x1000-mL P		None	

KMKER

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
S. Hamaker			MAY 05 2008				1545
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. Brewster			5-5-08				05/05/08 1545
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Date/Time

Disposed By

FINAL SAMPLE DISPOSITION

FLUOR HANFORD		C.O.C. #		S08-004-1145	
Collector <u>S. Hamaker</u>		J8E080216		W05392 Due 06.19.08	
SAF No.	S08-004	Contact/Requester	Sieve Trent	Telephone No.	509-373-5869
Project Title	SURV APRIL 2008	Sampling Origin	Hanford Site	MSIN	FAX
Shipped To (Lab)	TestAmerica Incorporated	Method of Shipment	Govt. Vehicle	Purchase Order/Charge Code	
Protocol	SURV	Priority:	45 Days	Ice Chest No.	SMC-600
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Hold Time	
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		Site-Wide Generator Knowledge Information Form applies.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Sample No.	Lab ID	Date	Time	No/Type Container	Activity Scan	Sample Analysis	Preservative
B1VC42	W	5-5-08	1324	1x20-mL P		None	
B1VC42	W	↓	↓	1x1000-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2	
B1VC42	W	↓	↓	1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	

KMK21

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
S. Hamaker	Print	Signature	MAY 05 2008	Received By	Print	Signature	MAY 05 2008	<input type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Solid <input type="checkbox"/> Shallow <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/> DS <input type="checkbox"/> DI <input type="checkbox"/> T <input type="checkbox"/> WI <input type="checkbox"/> LI <input type="checkbox"/> V <input type="checkbox"/> X
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time		







[illegible]



## Sample Check-in List

Date/Time Received: 05/05/08 1545 GM Screen Result .07  
Client: PBW SDG #: W05392 NA ☐ SAF #: 508-004 NA ☐  
Work Order Number: J8ED50216 Chain of Custody # 508-004-47,1145,815,275  
Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA ☐ Yes ☒ No ☐  
2. Custody Seals dated and signed? NA ☐ Yes ☒ No ☐  
3. Chain of Custody record present? NA ☐ Yes ☒ No ☐  
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet ☐ Dry ☐  
6. Number of samples in shipping container: 4  
7. Sample holding times exceeded? NA ☒ Yes ☐ No ☐  
8. Samples have:  
    \_\_\_\_\_ Tape \_\_\_\_\_ Hazard Labels  
    \_\_\_\_\_ Custody Seals ☒ Appropriate Sample Labels  
9. Samples are:  
    ☒ In Good Condition \_\_\_\_\_ Leaking  
    \_\_\_\_\_ Broken \_\_\_\_\_ Have Air Bubbles  
    (Only for samples requiring no head space)  
10. Sample pH taken? NA ☐ pH < 2 ☒ pH > 2 ☒ pH > 9 ☐ Amount HNO<sub>3</sub> Added \_\_\_\_\_  
11. Sample Location, Sample Collector Listed? \*  
    \*For documentation only. No corrective action needed.  
12. Were any anomalies identified in sample receipt? Yes ☐ No ☒  
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: S. Am. Vh Date: 05/05/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

☐ No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_









## Sample Check-in List

Date/Time Received: 05.05.08 1545 GM Screen Result .01  
Client: P6W SDG #: W05392 NA [ ] SAF #: W08-004 NA [ ]  
Work Order Number: J8E050219 Chain of Custody # W08-004-181  
Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]  
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]  
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]  
4. Cooler Temperature: \_\_\_\_\_ NA [✓] 5. Vermiculite packing materials is NA [✓] Wet [ ] Dry [ ]  
6. Number of samples in shipping container: 1  
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]  
8. Samples have:  
    \_\_\_\_\_ Tape \_\_\_\_\_ Hazard Labels  
    \_\_\_\_\_ Custody Seals / \_\_\_\_\_ Appropriate Sample Labels  
9. Samples are:  
    / \_\_\_\_\_ In Good Condition  
    \_\_\_\_\_ Broken \_\_\_\_\_ Leaking  
    \_\_\_\_\_ Have Air Bubbles  
    (Only for samples requiring no head space.)  
10. Sample pH taken? NA [ ] pH < 2 [✓] pH > 2 [ ] pH > 9 [ ] Amount HNO<sub>3</sub> Added None  
11. Sample Location, Sample Collector Listed? \*  
    \*For documentation only. No corrective action needed.  
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]  
13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: S. Smith Date: 05.05.08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

[illegible]





## Sample Check-in List

Date/Time Received: 5608 1515 GM Screen Result 0.1K

Client: PGW SDG #: W05392 NA [ ] SAF #: I08-032 NA [ ]

Work Order Number: J8E070109 Chain of Custody # I08-032-69

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]

6. Number of samples in shipping container: 1

7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]

8. Samples have:

☒ Tape  
☒ Custody Seals

☒ Hazard Labels  
☒ Appropriate Sample Labels

9. Samples are:

☒ In Good Condition  
☐ Broken

☐ Leaking  
☐ Have Air Bubbles  
(Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH < 2 ☒ pH > 2 [ ] pH > 9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_

11. Sample Location, Sample Collector Listed? \*  
\*For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [ ] No ☒

13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian:  Date: 5608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_



[illegible]



## Sample Check-in List

Date/Time Received: 5608 1515 GM Screen Result 0.1K

Client: PGW SDG #: W05392 NA [ ] SAF #: I08-036 NA [ ]

Work Order Number: J8E070111 Chain of Custody # I08-036-84

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]

6. Number of samples in shipping container: 1

7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]

8. Samples have:

☒ Tape  
☒ Custody Seals

☒ Hazard Labels  
☒ Appropriate Sample Labels

9. Samples are:

☒ In Good Condition  
☐ Broken

☐ Leaking  
☐ Have Air Bubbles  
(Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH<2 ☒ pH>2 ☒ pH>9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_

11. Sample Location, Sample Collector Listed? \*  
\*For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [ ] No ☒

13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian:  Date: 5608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_







FLUOR HANFORD		C.O.C. #		S08-004-73	
Collector <b>D.J. Sparks</b>		Telephone No.		MSIN	
SAF No. S08-004		509-373-5869		FAX	
Project Title		Purchase Order/Charge Code		Page 1 of 0	
SURV. APRIL 2008		Ice Chest No. 6W-1		Temp.	
Shipped To (Lab)		Bill of Lading/Air Bill No.			
Test/America Incorporated, Richland		Offsite Property No.			
Protocol		Priority: 45 Days			
SPECIAL INSTRUCTIONS		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
POSSIBLE SAMPLE HAZARDS/REMARKS		Site-Wide Generator Knowledge Information Form applies.			
** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)					

Sample No.	Lab ID	Date	Time	No./Type Container	Activity Scan	Sample Analysis	Preservative
B1TWR1	KMANZ	5/6/08	12:34	1x20-mL P	SRISO_SEP_PRECIP_GPC: Sr-90 (1)	None	
B1TWR1				3x1000-mL G/P	GAMMALL_GS: List-1 (9)	HNO3 to pH <2	
B1TWR1				1x4000-mL G/P	TC99_ETVDSK_LSC: Tc-99 (1)	HNO3 to pH <2	
B1TX39	KMANDL			1x500-mL P	UTOT_KPA: Uranium (1)	HCl to pH <2	
B1TX39				1x500-mL G/P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HNO3 to pH <2	
B1TX39				1x1000-mL P	I129_SEP_LEPS_GS: I-129 (1)	None	
B1TX39				2x4000-mL G/P	906.0_H3_LSC: Tritium (1)	None	
B1TX39				1x1000-mL P		None	

1515 5/6/08 ANT 5/6/08 ANT

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.J. Sparks			MAY 06 2008	APR LVLANE	TAL		MAY 06 2008
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)			
				Date/Time			

- Matrix \*
- DS = Drum Solid
  - DL = Drum Liquid
  - T = Tissue
  - W = Wine
  - L = Liquid
  - V = Vegetation
  - X = Other



## Sample Check-in List

Date/Time Received: 5608 1515 GM Screen Result 0.1K

Client: PAW SDG #: W05392 NA [ ] SAF #: S08-004 NA [ ]

Work Order Number: J8E070113 Chain of Custody # S08-004-233,-73

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes ☒ No [ ]
2. Custody Seals dated and signed? NA [ ] Yes ☒ No [ ]
3. Chain of Custody record present? NA [ ] Yes ☒ No [ ]
4. Cooler Temperature: \_\_\_\_\_ NA ☒ 5. Vermiculite/packing materials is NA ☒ Wet [ ] Dry [ ]

6. Number of samples in shipping container: 3

7. Sample holding times exceeded? NA ☒ Yes [ ] No [ ]

8. Samples have:

☒ Tape  
☒ Custody Seals

☒ Hazard Labels  
☒ Appropriate Sample Labels

9. Samples are:

☒ In Good Condition  
☐ Broken

☐ Leaking  
☐ Have Air Bubbles  
(Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH < 2 ☒ pH > 2 ☒ pH > 9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_

11. Sample Location, Sample Collector Listed? \*  
\*For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [ ] No ☒

13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: RJR Date: 5608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_



<b>FLUOR HANFORD</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		<b>C.O.C. # S08-004-37</b>	
J8E070115 W05392 DUE 62008 KMWEL		Page 1 of 0			
<b>Collecto Roy Sickle</b>		<b>Contact/Requester</b> Steve Tenn		<b>MSIN</b> 509-373-5869	
<b>SAF No.</b> S08-004		<b>Sampling Origin</b> Hanford Site		<b>Purchase Order/Charge Code</b>	
<b>Project Title</b> SURV. APRIL 2008		<b>Method of Shipment</b> Govt. Vehicle		<b>Ice Chest No.</b> Temp.	
<b>Shipped To (Lab)</b> TestAmerica Incorporated, Richmond		<b>Priority:</b> 45 Days		<b>Offsite Property No.</b>	
<b>Protocol</b> SURV		<b>SPECIAL INSTRUCTIONS</b> Site-Wide Generator Knowledge Information Form applies.		<b>Total Activity Exemption:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<p><b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>          ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)</p>					

Sample No.	Lab ID	+	Date	Time	No/Type Container	Activity Scan	Sample Analysis	Preservative
B1TWF3		W	5-6-08	1103	1x20-mL P	C14_LSC: C-14 (1) -	None	
B1TWF3		W			2x1000-mL G/P	TC99_ETVDSK_LSC: Tc-99 (1) -	None	
B1TWF3		W			1x500-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) -	HCl to pH <2	
B1TWF3		W			1x1000-mL P	906.0_H3_LSC: Tritium (1) -	HNO3 to pH <2	
B1TWF3		W			1x1000-mL P		None	

Relinquished By <b>Roy Sickle</b>		Date/Time <b>MAY 06 2008 1515</b>		Sign <b>TAL</b>		Date/Time <b>MAY 06 2008 1515</b>		Matrix *	
Relinquished By		Date/Time		Sign		Date/Time		S = Soil SF = Sediment SL = Solid W = Shallow O = Water A = Air DS = Drum Solid DL = Drum Liquid T = Tissue WI = Wine LI = Liquid V = Vegetation X = Other	
Relinquished By		Date/Time		Sign		Date/Time			
Relinquished By		Date/Time		Sign		Date/Time			
<b>FINAL SAMPLE DISPOSITION</b>		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By			
						Date/Time			

FLUOR HANFORD		C.O.C. #		S08-004-38
J8E070115 W05392 DUE 62008 KMNE3		Page 1 of 2		
Collector Roy Sickle	Contact/Requester Steve Trent	MSIN	Telephone No. 509-373-5869	FAX
SAF No. S08-004	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title SURV APRIL 2008	Method of Shipment Govt Vehicle	Ice Chest No.		
Shipped To (Lab) TestAmerica Incorporated, Richland	Priority: 45 Days	Bill of Lading/Air Bill No.		
Protocol SURV	SPECIAL INSTRUCTIONS Site-Wide Generator Knowledge Information Form applies.	Offsite Property No.		
POSSIBLE SAMPLE HAZARDS/REMARKS ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Lab ID	Date	Time	No/Type Container	Activity Scan	Sample Analysis	Preservative
B1TW4	W	5-6-08	0730	1x20-mL P	C14_LSC: C-14 (1)	None	None
B1TW4	W			2x1000-mL GP	TC99_ETVDSK_LSC: Tc-99 (1)	None	None
B1TW4	W			1x500-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2)	HCl to pH <2	HNO3 to pH <2
B1TW4	W			1x1000-mL P	906.0_H3_LSC: Tritium (1)	None	None

Relinquished By <b>Roy Sickle</b>	Date/Time MAY 06 2008 1515	Signature <i>[Signature]</i>	Print MAY 06 2008 1515	Date/Time MAY 06 2008 1515	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Soil S SH SO SL W O A
Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Sediment DS DL T Solid Shrine Water Oil Air
Relinquished By	Date/Time	Received By	Date/Time	Date/Time	Drum Solid Drum Liquid Tissue Wine Liquid Vegetation Other
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Date/Time



FLUOR HANFORD		C.O.C. #		S08-004-31
J8E070115		W05392		DUE 6 2008
KME6		KME6		Page 1 of 0
Contact/Requester		Telephone No.		MSIN
Sieve Test		509-373-5869		FAX
Sampling Origin		Purchase Order/Charge Code		
Hanford Site				
Method of Shipment		Ice Chest No.		Temp.
Govt. Vehicle		Bill of Lading/Air Bill No.		
Priority: 45 Days		Offsite Property No.		
SPECIAL INSTRUCTIONS		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Site-Wide Generator Knowledge Information Form applies				

Sample No.	Lab ID	* W	Date	Time	No/Type Container	Activity Scan	Sample Analysis	Preservative
B1TWFO		W	5-6-08	12:25	1x20-mL P	C14_LSC: C-14 (1) ✓	None	
B1TWFO		W			2x1000-mL GP	SRISO_SEP_PRECIP_GPC: Sr-90 (1) ✓	None	
B1TWFO		W			3x1000-mL GP	TC99_ETVDSK_LSC: Tc-99 (1) ✓	HNO3 to pH <2	
B1TWFO		W			1x500-mL P	9310_ALPHABETA_GPC: Alpha + Beta (2) ✓	HCl to pH <2	
B1TWFO		W			1x1000-mL P		HNO3 to pH <2	

POSSIBLE SAMPLE HAZARDS/REMARKS  
 \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

Relinquished By	Signature	Date/Time	Received By	Signature	Date/Time
Roy Sickle		MAY 06 2008	Received By		MAY 06 2008
Relinquished By			Received By		
Relinquished By			Received By		
Relinquished By			Received By		
FINAL SAMPLE DISPOSITION			Disposal Method (e.g., Return to customer, per lab procedure, used in process)		
			Date/Time		

Matrix *					
S	Soil	DS	Drum Solid		
SF	Sediment	DL	Drum Liquid		
SO	Solid	T	Tissue		
SI	Shed	WI	Wine		
W	Water	L	Liquid		
O	Oil	V	Venation		
A	Air	X	Other		



## Sample Check-in List

Date/Time Received: 5608 1515 GM Screen Result 0.1K  
Client: PGW SDG #: W05392 NA [ ] SAF #: 508-004 NA [ ]  
Work Order Number: 18E07D115 Chain of Custody # 508-004-37,38,-31

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

1. Custody Seals on shipping container intact? NA [ ] Yes [X] No [ ]  
2. Custody Seals dated and signed? NA [ ] Yes [X] No [ ]  
3. Chain of Custody record present? NA [ ] Yes [X] No [ ]  
4. Cooler Temperature: \_\_\_\_\_ NA [X] 5. Vermiculite/packing materials is NA [X] Wet [ ] Dry [ ]

6. Number of samples in shipping container: 3

7. Sample holding times exceeded? NA [X] Yes [ ] No [ ]

8. Samples have:

\_\_\_\_ Tape  
\_\_\_\_ Custody Seals

\_\_\_\_ Hazard Labels  
\_\_\_\_ Appropriate Sample Labels

9. Samples are:

\_\_\_\_ In Good Condition  
\_\_\_\_ Broken

\_\_\_\_ Leaking  
\_\_\_\_ Have Air Bubbles  
(Only for samples requiring no head space.)

10. Sample pH taken? NA [ ] pH<2 [X] pH>2 [X] pH>9 [ ] Amount HNO<sub>3</sub> Added \_\_\_\_\_

11. Sample Location, Sample Collector Listed? \*  
\* For documentation only. No corrective action needed.

12. Were any anomalies identified in sample receipt? Yes [ ] No [X]

13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: RJP Date: 5608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_



6/4/2008 1:50:45 PM

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

## Sample Preparation/Analysis

AZ Gross Alpha PpRC5014

S7 Gross Alpha by GPC using Am-241 curve

51 CLIENT: HANFORD

AnalyDueDate: 06/16/2008 W05392

Batch: 8134482 WATER

PM, Quote: SS, 57671

pCi/L

SEQ Batch, Test: None

Balance Id: 1120482733

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: HarrisD (Box 8)

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KME2V-1-AC		200.00g.in		1.5	50	41.1	PA	1441	6/10/08	
J8E010329-1-SAMP										
05/01/2008 09:16										
2 KME2V-1-AE-X		200.00g.in				40.1	105			
J8E010329-1-DUP										
05/01/2008 09:16										
3 KME20-1-AC		200.20g.in				32.9	106			
J8E010329-2-SAMP										
05/01/2008 10:38										
4 KME22-1-AC		200.10g.in				41.7	100			
J8E010329-3-SAMP										
05/01/2008 11:40										
5 KME27-1-AC		200.10g.in				45.0	106			
J8E010329-4-SAMP										
05/01/2008 12:23										
6 KMKW3-1-AD		172.30g.in				38.7	100			
J8E050200-1-SAMP										
05/05/2008 10:15										
7 KMK2R-1-AC		200.20g.in				28.3	NP	1543	6/10/08	
J8E050218-1-SAMP										
05/05/2008 11:33										

TAL Richland  
Richland Wa.

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Prep\_SamplePrep v4.8.32



6/4/2008 1:50:47 PM

## Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

AZ Gross Alpha PrpRC5014

S7 Gross Alpha by GPC using Am-241 curve

51 CLIENT: HANFORD

AnalyDueDate: 06/16/2008

Batch: 8134482 WATER

PM, Quote: SS, 57671

pCi/L

SEQ Batch, Test: None

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: HarrisD

Work Order, Lot, Sample Date Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 KMK21-1-AC		200.10g,in								
J8E050216-2-SAMP						50	103	Alpha: 5.85E-05 uCi/Sa		Beta: -1.02E-04 uCi/Sa
05/05/2008 12:24						34.8				
9 KMK25-1-AC		185.20g,in								
J8E050216-3-SAMP										
05/05/2008 11:01						38.2				
10 KMK3R-1-AC		185.00g,in								
J8E050216-4-SAMP										
05/05/2008 13:07						50.6				
11 KMNDL-1-AC		200.20g,in								
J8E070113-3-SAMP										
05/06/2008 12:34						43.1				
12 KMNEL-1-AC		200.00g,in								
J8E070115-1-SAMP										
05/06/2008 11:03						32.5				
13 KMNE3-1-AC		200.30g,in								
J8E070115-2-SAMP										
05/06/2008 07:30						0				
14 KMNE6-1-AA		200.10g,in								
J8E070115-3-SAMP										
05/06/2008 10:25						28.8				

TAL Richland Key: In - Initial Amt, fl - Final Amt, dl - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 14

Prep\_SamplePrep v4.8.32

TESTAMERICA



6/4/2008 1:50:48 PM

# Sample Preparation/Analysis

Balance Id:1120482733

AZ Gross Alpha PrpRC5014  
S7 Gross Alpha by GPC using Am-241 curve  
51 CLIENT: HANFORD

Batch: 8134482

SEQ Batch, Test: None

pCi/L

Prep Tech: HarrisD

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Count On | Off

Comments:

CR Analyst, In/Date

Count (24hr) Circle

Detector Id

Count Time Min

Ppt or Geometry

Dish Size

QC Tracer Prep Date

Initial Aliquot Amt/Unit

Total Amt/Unit

Work Order, Lot, Sample Date/Time

15 KM5FT-1-AA-B

J8E130000-482-BLK

05/01/2008 09:16

200.20g/in

Amt/Rec

#Containers: 1

0.3

Scr:

Alpha:

Beta:

16 KM5FT-1-AC-C

J8E130000-482-LCS

05/01/2008 09:16

200.20g/in

Amt/Rec

#Containers: 1

0.7

Scr:

Alpha:

Beta:

Comments: KMKW3-SAMP \*Comments: ISV for DUP so please recount on different detector- DL 6/2/08\*

Head. Aliquots reduced due to wt screens out 6/4/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KME2VLAC-SAMP Constituent List:

ALPHA RDL:3 pCi/L LCL: UCL: RPD:

KM5FT1AA-BLK:

ALPHA RDL:3 pCi/L LCL: UCL: RPD:

KM5FT1AC-LCS:

Am-241 RDL: pCi/L LCL:70 UCL:130 RPD:20

KME2VLAC-SAMP Calc Info:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

KM5FT1AA-BLK:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

KM5FT1AC-LCS:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Approved By

Date:

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktalled Added

Page 3

ISV - Insufficient Volume for Analysis

WO Cnt: 16

Prep\_SamplePrep v4.8.32

6/11/2008 10:04:22 AM

# ICOC Fraction Transfer/Status Report

ByDate: 6/12/2007, 6/16/2008, Batch: '8134482', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134482</b>				
AC	Rev1C	HarrisD	6/4/2008 1:40:08 PM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		HarrisD	InPrep	6/4/2008 1:40:08 PM
SC		HarrisD	Prep1C	6/4/2008 1:50:49 PM
SC		BlackCL	InPrep2	6/9/2008 10:40:26 AM
SC		BockJ	Prep2C	6/10/2008 1:26:16 PM
SC		BlackCL	InCnt1	6/10/2008 1:28:34 PM
SC		DAWKINSO	CalcC	6/10/2008 8:55:06 PM
SC		nortonj	Rev1C	6/11/2008 10:04:16 AM
AC		HarrisD	6/4/2008 1:50:49 PM	
AC		BlackCL	6/9/2008 10:40:26	
AC		BockJ	6/10/2008 1:26:16 PM	
AC		BlackCL	6/10/2008 1:28:34 PM	
AC		DAWKINSO	6/10/2008 8:55:06 PM	
AC		nortonj	6/11/2008 10:04:16	

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 7  
ICOCFractions v4.8.33



6/4/2008 2:06:03 PM

38468, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

## Sample Preparation/Analysis

Balance Id: 1120482733

BC Gross Beta PrpRC5014  
S8 Gross Beta by GPC using Sr/Y-90 curve  
51 CLIENT: HANFORDPipet #: 265AnalyDueDate: 06/16/2008 WDS392

Sep1 DT/Tm Tech:

Batch: 8134483 WATER

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

PCVL

SEQ Batch, Test: None

Prep Tech: HarrisD Box k 8

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KME2V-1-AD		200.30g.in								
J8E010329-1-SAMP										
05/01/2008 09:16										
2 KME20-1-AD		200.30g.in								
J8E010329-2-SAMP										
05/01/2008 10:38										
3 KME20-1-AE-X		200.00g.in								
J8E010329-2-DUP										
05/01/2008 10:38										
4 KME22-1-AD		200.20g.in								
J8E010329-3-SAMP										
05/01/2008 11:40										
5 KME27-1-AD		200.00g.in								
J8E010329-4-SAMP										
05/01/2008 12:23										
6 KMKW3-1-AE		200.20g.in								
J8E050200-1-SAMP										
05/05/2008 10:15										
7 KMK2R-1-AD		200.30g.in								
J8E050216-1-SAMP										
05/05/2008 11:33										

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1 WO Cnt: 7

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added Prep\_SamplePrep v4.8.32



6/4/2008 2:06:05 PM

## Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

BC Gross Beta PrpRC5014

S8 Gross Beta by GPC using Sr/Y-90 curve

51 CLIENT: HANFORD

AnalyDueDate: 06/16/2008

Batch: 8134483 WATER

pCi/L

PM, Quote: SS, 57671

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On / Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 KMK21-1-AD		200.10g.in								
J8E050216-2-SAMP										
05/05/2008 12:24										
9 KMK25-1-AD		200.30g.in								
J8E050216-3-SAMP										
05/05/2008 11:01										
10 KMK3R-1-AD		200.10g.in								
J8E050216-4-SAMP										
05/05/2008 13:07										
11 KMKDL-1-AD		200.10g.in								
J8E070113-3-SAMP										
05/06/2008 12:34										
12 KMKEL-1-AD		200.00g.in								
J8E070115-1-SAMP										
05/06/2008 11:03										
13 KMKNE3-1-AD		200.40g.in								
J8E070115-2-SAMP										
05/06/2008 07:30										
14 KMKNE6-1-AC		200.20g.in								
J8E070115-3-SAMP										
05/06/2008 10:25										

1.5 100 282 1578 6/16/08

Beta: -1.02E-04 uCi/Sa

Alpha: 5.85E-05 uCi/Sa

Scr: 28D

Beta: 1.55E-04 uCi/Sa

Alpha: 7.08E-04 uCi/Sa

Scr: 31A

Beta: 6.31E-04 uCi/Sa

Alpha: 3.28E-04 uCi/Sa

Scr: 31B

Beta: 7.81E-04 uCi/Sa

Alpha: 1.03E-03 uCi/Sa

Scr: 31D

Beta: -1.21E-04 uCi/Sa

Alpha: 1.17E-04 uCi/Sa

Scr: 32A

Beta: 2.26E-04 uCi/Sa

Alpha: -3.53E-04 uCi/Sa

Scr: 32B

Beta: -3.19E-05 uCi/Sa

Alpha: -1.58E-04 uCi/Sa

Scr: 32C

WO Cnt: 14  
Prep\_SamplePrep v4.8.32

ISV - Insufficient Volume for Analysis

Page 2

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed AddedTAL Richland  
Richland Wa.



6/4/2008 2:06:06 PM

## Sample Preparation/Analysis

Balance Id:1120482733

BC Gross Beta PrpRC5014

S8 Gross Beta by GPC using Sr/Y-90 curve

51 CLIENT: HANFORD

AnalyDueDate: 06/16/2008

Batch: 8134483

SEQ Batch, Test: None

pCi/L

Prep Tech: HarrisD

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 KM5FV-1-AA-B		200.50g.in								
JBE130000-483-BLK										
05/01/2008 10:38										
16 KM5FV-1-AC-C		200.30g.in								
JBE130000-483-LCS										
05/01/2008 10:38										

Comments: KMKW3-SAMP Comments: ISV for DUP so please recount on different detector- DL 6/2/08\*

04220 OVA'S 6/4/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KME2V1AD-SAMP Constituent List:

BETA	RDL: 4	pCi/L	LCL:	UCL:	RPD:
KM5FV1AA-BLK:					
BETA	RDL: 4	pCi/L	LCL:	UCL:	RPD:
KM5FV1AC-LCS:					
Sr-90	RDL:	pCi/L	LCL:70	UCL:130	RPD:20
KME2V1AD-SAMP Calc Info:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	
KM5FV1AA-BLK:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	
KM5FV1AC-LCS:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B	

Approved By

Date:

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

ISV - Insufficient Volume for Analysis

WO Cnt: 16

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Prep\_SamplePrep v4.8.32

6/11/2008 10:00:05 AM

# ICOC Fraction Transfer/Status Report

ByDate: 6/12/2007, 6/16/2008, Batch: '8134483', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134483</b>				
AC	Rev1C	HarrisD	6/4/2008 1:52:36 PM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		HarrisD	InPrep	6/4/2008 1:52:36 PM
SC		HarrisD	Prep1C	6/4/2008 2:06:05 PM
SC		BlackCL	InPrep2	6/9/2008 10:40:18 AM
SC		BockJ	Prep2C	6/10/2008 1:26:31 PM
SC		BlackCL	InCnt1	6/10/2008 1:28:43 PM
SC		DAWKINSO	CalcC	6/10/2008 8:53:42 PM
SC		nortonj	Rev1C	6/11/2008 9:59:56 AM
AC		HarrisD	6/4/2008 2:06:05 PM	
AC		BlackCL	6/9/2008 10:40:18	
AC		BockJ	6/10/2008 1:26:31 PM	
AC		BlackCL	6/10/2008 1:28:43 PM	
AC		DAWKINSO	6/10/2008 8:53:42 PM	
AC		nortonj	6/11/2008 9:59:56	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.33



Balance Id:1120373922,1120373922,1120

Pipet #: \_\_\_\_\_

Sep1 DT/Tm Tech: 06/06/2008 11:34,ManisD

Sen2 DT/Trm Tech- 06/13/2008 08:40 ManisD

8134492 CLTL, 8134494 BNTB, 8134497 ARS6 8134500

.....

Dish Size	Ppt or Geometry	Count Time Min	Detector Id
-----------	-----------------	----------------	-------------

100

**Abstract**

06/06/2008-11:34:51-06/13/2008

Alpha: 3.29E-04 uCi/Sa  
Beta: 6.31E-04 uCi/Sa

100

11

02/64

[illegible]

1

100

03/64

\*\*\*\*\*

1

3

1

03701

**Abstract**

1

V - I

10



Sample Preparation/Analysis										Balance Id: 1120373922, 1120373922, 1120	
CL Sr-90 Prp/SepRC5006(5071)										Pipet #:	
TL Sr-85 by Nal and Sr-90 by GPC 7 day ingrowth										Sep1 DT/Tm Tech: 06/06/2008 11:34, ManisD	
5I CLIENT: HANFORD										Sep2 DT/Tm Tech: 06/13/2008 08:40, ManisD	
PM, Quote: SS, 57671										Prep Tech: ManisD	
Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
5 KMNDE-1-AC	1000.30g.in	SRTB16220	05/21/08, pd		1.0	21.8	100	1B	0741	6/14/08	
J8E070113-1-SAMP								1B	0846	6/15/08	
06/06/2008 11:34:51, 06/13/2008											
6 KMNDE-1-AC	1000.06g.in	SRTB16221	05/21/08, pd		1.0	21.9	100	1C	0741	6/14/08	
J8E070113-2-SAMP								1C	0846	6/16/08	
06/06/2008 11:34:51, 06/13/2008											
7 KMNDE-1-AE	1000.23g.in	SRTB16222	05/21/08, pd		1.0	21.5	100	1D	0741	6/14/08	
J8E070115-3-SAMP								1D	0846	6/16/08	
06/06/2008 11:34:51, 06/13/2008											
8 KMNDE-1-AA-B	1000.16g.in	SRTB16223	05/21/08, pd		1.0	21.1	100	2P	0741	6/14/08	
J8E130000-492-BLK								2P	0846	6/16/08	
06/06/2008 11:34:51, 06/13/2008											
05/06/2008 11:03								Scr:	Alpha:	Beta:	



6/13/2008 12:03:47 PM

## Sample Preparation/Analysis

Balance Id:1120373922,1120373922,1120

CL Sr-90 Prp/SepRC5006(5071)

TL Sr-85 by NaI and Sr-90 by GPC 7 day ingrowth

51 CLIENT: HANFORD

AnalytDueDate: 06/19/2008

Batch: 8134492

SEQ Batch, Test: None

pCi/L

Prep Tech: ManisD

Sep1 DT/Tm Tech: 06/06/2008 11:34,ManisD

Sep2 DT/Tm Tech: 06/13/2008 08:40,ManisD

Pipet #:

Work Order, Lot, Sample Date/Time	Total Ami/Unit	Initial Aliquot Ami/Unit	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
9 KM5GE1-AC-C	1000.39g.in	SRS31468	04/11/08,pd		1.0	20.8	100	25	0741	6/14/08	
J8E130000-492-LCS			05/22/07					25	0844	6/18/08	
											06/06/2008 11:34:st, 06/13/2008
05/06/2008 11:03											

#Containers: 1

AmiRec:

Scr:

Beta:

Comments: KMNDG-SAMP "Comments: isv for gamma dup. Please recount on a different detector. DLH 6/3/08"

All Clients for Batch:

394868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS , 57671

KM3R1AF-SAMP Constituent List:

Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20
KM5GE1AA-BLK:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:	UCL:	RPD:
KM5GE1AC-LCS:											
Sr-85	RDL:	pCi/L	LCL:20	UCL:105	RPD:20	Sr-90	RDL:2	pCi/L	LCL:70	UCL:130	RPD:20

KM3R1AF-SAMP Calc Info:

Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KM5GE1AA-BLK:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
KM5GE1AC-LCS:				
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

Approved By

Date:

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

ISV - Insufficient Volume for Analysis

WO Cnt: 9

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Prep\_SamplePrep v4.8.32

6/16/2008 2:59:28 PM

# ICOC Fraction Transfer/Status Report

ByDate: 6/17/2007, 6/21/2008, Batch: '8134492', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134492</b>				
AC	Rev1C	LucasD	5/28/2008 1:51:33 PM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		LucasD	InPrep	5/28/2008 1:51:33 PM
SC		ManisD	InSep1	5/29/2008 8:34:36 AM
SC		ManisD	Sep1C	6/6/2008 11:52:16 AM
SC		BlackCL	InCnt1	6/6/2008 12:15:21 PM
SC		DAWKINSO	Cnt1C	6/6/2008 8:00:31 PM
SC		ManisD	Sep2C	6/13/2008 12:06:44 PM
SC		BlackCL	CalcC	6/15/2008 7:17:50 AM
SC		nortonj	Rev1C	6/16/2008 2:59:21 PM
AC		ManisD		5/29/2008 8:34:36
AC		ManisD		6/6/2008 11:52:16
AC		BlackCL		6/6/2008 12:15:21 PM
AC		DAWKINSO		6/6/2008 8:00:31 PM
AC		ManisD		6/13/2008 12:06:44
AC		BlackCL		6/15/2008 7:17:50
AC		nortonj		6/16/2008 2:59:21 PM

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 8  
ICOCFractions v4.8.33



6/3/2008 4:27:45 PM

## Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory  
Pacific Northwest National LabAW Gamma PrpRC5017  
TA Gamma by HPGCE  
SI CLIENT: HANFORD

AnalyteDueDate: 06/20/2008 1053392

Batch: 8134491 WATER

PM, Quote: SS, 57671

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: HarrisD 18082

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KMNDD-1-AA		2000.50g.in								
J8E070113-2-SAMP										
05/06/2008 12:34										
2 KMNDD-1-AD-X										
J8E070113-2-DUP										
05/06/2008 12:34										
3 KMNDD-1-AA-B		2000.50g.in								
J8E130000-491-BLK										
05/06/2008 12:34										
4 KMNDD-1-AC-C		2000.20g.in								
J8E130000-491-LCS										
05/06/2008 12:34										

Comments: KMNDD-SAMP "Comments: isv for gamma dup. Please recount on a different detector. DLH 6/3/08"

1820 06/23/08

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KMNDD-1-AD-X Constituent List:

Co-60	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:
Cs-137	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RDL:6.00E+00	pCi/L	LCL:70	UCL:130	RDL:20
Eu-154	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:
K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:0.00E+00	pCi/L	LCL:	UCL:	RDL:

KMNDD-1-AD-X

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 1

WO Cnt: 4

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

Prep\_SamplePrep v4.8.32

6/3/2008 4:27:47 PM

## Sample Preparation/Analysis

Balance Id:1120482733

AW Gamma PrpRC5017  
TA Gamma by HPGE  
SI CLIENT: HANFORD

Pipet #:

AnalyteDueDate: 06/20/2008

Sep1 DT/Tm Tech:

Batch: 8134491  
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

pCi/L

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Co-60	RDL:0.00E+00	pCi/L	UCL:	RPD:	Cs-134	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:6.00E+00	pCi/L	UCL:	RPD:	Cs-137DA	RDL:6.00E+00	pCi/L	LCL:	UCL:	RPD:
Eu-154	RDL:0.00E+00	pCi/L	UCL:	RPD:	Eu-155	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
K-40	RDL:0.00E+00	pCi/L	UCL:	RPD:	Sb-125	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
KM5GDIAC-LCS:										
Cs-137	RDL:15	pCi/L	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
U-238	RDL:--	pCi/L	UCL:130	RPD:20						
KM5GDIAC-SAMP Calc Info:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
KM5GDIAC-BLK:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
KM5GDIAC-LCS:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
Approved By										Date:

Approved By

Date:

TESTAMERICA



6/9/2008 7:47:06 AM

## ICOC Fraction Transfer/Status Report

ByDate: 6/10/2007, 6/14/2008, Batch: '8134491', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting		Comments
8134491					
AC	Rev1C	HarrisD	6/3/2008 4:23:30 PM		
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM	ICOC_RADCALC v4.8.32
SC		HarrisD	InPrep	6/3/2008 4:23:30 PM	RICH-RC-5015 Revision 6
SC		HarrisD	Prep1C	6/3/2008 4:27:47 PM	RICH-RC-5017 REVISION 6
SC		BockJ	InPrep2	6/4/2008 8:30:28 AM	RICH-RC-5017 REVISION 6
SC		BockJ	Prep2C	6/5/2008 9:04:04 AM	RICH-RC-5017 REVISION 6
SC		BlackCL	InCnt1	6/5/2008 9:14:15 AM	RICH-RD-0007 REVISION 6
SC		BlackCL	CalcC	6/5/2008 4:10:25 PM	RICH-RD-0007 REVISION 6
SC		nortonj	Rev1C	6/9/2008 7:47:00 AM	RICH-RC-0002 REV 8
AC		HarrisD	6/3/2008 4:27:47 PM		
AC		BockJ	6/4/2008 8:30:28 AM		
AC		BockJ	6/5/2008 9:04:04 AM		
AC		BlackCL	6/5/2008 9:14:15 AM		
AC		BlackCL	6/5/2008 4:10:25 PM		
AC		nortonj	6/9/2008 7:47:00 AM		

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

6/2/2008 4:29:04 PM

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

## Sample Preparation/Analysis

Balance Id:1120482733

AW Gamma PrpRC5017  
TA Gamma by HPGE  
51 CLIENT: HANFORD

AnalyteDueDate: 06/19/2008

Sep1 DT/Tm Tech:

Batch: 8134490 WATER

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

pC/L

Prep Tech: LucasD

Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
-----------------------------------	----------------	--------------------------	---------------------	-----------	-----------------	----------------	-------------	------------------------------	-----------------------	-----------

1 KMKW3-1-AJ 2500.60g.in

J8E050200-1-SAMP

05/05/2008 10:15  
AmfRec: 20ML, 500G, 5XLP #Containers: 7

2 KMKW3-1-AK-X

J8E050200-1-DUP

05/05/2008 10:15  
AmfRec: 20ML, 500G, 5XLP #Containers: 7

3 KMKW3-1-AA-B

J8E130000-490-BLK

05/05/2008 10:15  
AmfRec: #Containers: 1

4 KMKW3-1-AC-C

J8E130000-490-LCS

05/05/2008 10:15  
AmfRec: #Containers: 1

Comments: KMKW3-SAMP "Comments: ISV for DUP so please recount on different detector- DL 6/2/08"

Please recount on diff detector

All Clients for Batch:

384868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KMKW3-1-AJ-SAMP Constituent List:

Co-60	RDL:2.50E+01	PC1/L	LCL:	UCL:	RPD:	CS-134	RDL:1.50E+01	PC1/L	LCL:	UCL:	RPD:
CS-137	RDL:1.50E+01	PC1/L	LCL:70	UCL:130	RPD:20	CS-137DA	RDL:1.50E+01	PC1/L	LCL:70	UCL:130	RPD:
Eu-152	RDL:5.00E+01	PC1/L	LCL:	UCL:	RPD:	Eu-154	RDL:5.00E+01	PC1/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	PC1/L	LCL:	UCL:	RPD:	K-40	RDL:0.00E+00	PC1/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	PC1/L	LCL:	UCL:	RPD:						

KMKW3-1-AA-BLK:

TAL Richland

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 4

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Prep\_SamplePrep v4.8.32



6/2/2008 4:29:05 PM

## Sample Preparation/Analysis

Balance ID:1120482733

AW Gamma PrpRC5017

TA Gamma by HPGE

SI CLIENT: HANFORD

AnalyDueDate: 06/19/2008

Batch: 8134490  
SEQ Batch, Test: None

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, In/Date	Comments:
Co-60	RDL:2.50E+01	pCi/L	UCL:	RPD:	Cs-134	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Cs-137	RDL:1.50E+01	pCi/L	UCL:	RPD:	Cs-137DA	RDL:1.50E+01	pCi/L	LCL:	UCL:	RPD:
Eu-152	RDL:5.00E+01	pCi/L	UCL:	RPD:	Eu-154	RDL:5.00E+01	pCi/L	LCL:	UCL:	RPD:
Eu-155	RDL:5.00E+01	pCi/L	UCL:	RPD:	K-40	RDL:0.00E+00	pCi/L	LCL:	UCL:	RPD:
Sb-125	RDL:5.00E+01	pCi/L	UCL:	RPD:						
QM5F81AC-LCS:										
Cs-137	RDL:15	pCi/L	UCL:130	RPD:20	Cs-137DA	RDL:15	pCi/L	LCL:70	UCL:130	RPD:20
K-40	RDL:6	pCi/L	UCL:130	RPD:20	Ra-226	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
RA-228	RDL:--	pCi/L	UCL:130	RPD:20	RA-228DA	RDL:--	pCi/L	LCL:70	UCL:130	RPD:20
D-238	RDL:--	pCi/L	UCL:130	RPD:20						
QM5F81AJ-SAMP Calc Info:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
QM5F81AA-BLK:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						
QM5F81AC-LCS:										
Uncert Level (#s): 2	Decay to Sadt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B						

Approved By

Date:

TESTAMERICA

6/6/2008 10:04:44 AM

## ICOC Fraction Transfer/Status Report

ByDate: 6/7/2007, 6/11/2008, Batch: '8134490', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134490</b>				
AC	Rev1C	BockJ	6/5/2008 9:03:56 AM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		BockJ	Prep2C	6/5/2008 9:03:56 AM
SC		BlackCL	InCnt1	6/5/2008 9:14:11 AM
SC		BlackCL	CalcC	6/5/2008 4:10:38 PM
SC		nortonj	Rev1C	6/6/2008 10:04:36 AM
AC		BlackCL		6/5/2008 9:14:11 AM
AC		BlackCL		6/5/2008 4:10:38 PM
AC		nortonj		6/6/2008 10:04:36

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 4  
ICOCFractions v4.8.33



6/2/2008 12:41:27 PM

## Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SEP5025  
TB Gamma by LEPD384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

AnalyteDueDate: 06/16/2008

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

PM, Quote: SS, 57671

pCi/L

Batch: 8134494 WATER

SEQ Batch, Test: None

Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KME2Q-1-AA J8E010326-1-SAMP 04/29/2008 08:00		3870.20g.in	ITA7278 05/21/08			32.9 100min	L2	Alpha: 3.48E-04 uCi/Sa Beta: 9.18E-04 uCi/Sa		6/5/08
2 KME2Q-1-AC-X J8E010326-1-DUP 04/29/2008 08:00		3878.30g.in	ITA7279 05/21/08			35.0	L2 49 155502 1924	Alpha: 3.48E-04 uCi/Sa Beta: 9.18E-04 uCi/Sa		
3 KME2T-1-AA J8E010326-2-SAMP 04/29/2008 08:00		3884.00g.in	ITA7280 05/21/08			33.2	L5	Alpha: 4.88E-04 uCi/Sa Beta: 7.42E-04 uCi/Sa		
4 KMK25-1-AE J8E050216-3-SAMP 05/05/2008 11:01		3810.10g.in	ITA7281 05/21/08			33.6	L2	Alpha: 7.08E-04 uCi/Sa Beta: 1.55E-04 uCi/Sa		
5 KMK3R-1-AE J8E050216-4-SAMP 05/05/2008 13:07		3857.50g.in	ITA7282 05/21/08			35.6	L4	Alpha: 3.29E-04 uCi/Sa Beta: 6.31E-04 uCi/Sa		
6 KMNDE-1-AA J8E070113-1-SAMP 05/05/2008 09:24		3890.60g.in	ITA7283 05/21/08			35.8	L5	Alpha: 5.94E-04 uCi/Sa Beta: 6.74E-04 uCi/Sa		6/6/08
7 KMG5M-1-AA-B J8E130000-494-BLK 04/29/2008 08:00		3990.10g.in	ITA7284 05/21/08			36.3	L2	Alpha: 5.94E-04 uCi/Sa Beta: 6.74E-04 uCi/Sa		

TAL Richland

Key: In - Initial Amt,

fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 1

ISV - Insufficient Volume for Analysis

WO Cnt: 7

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Prep\_SamplePrep v4.8.32

6/2/2008 12:41:29 PM

## Sample Preparation/Analysis

Balance Id: 1120482733

BN I-129 Prp/SepRC5025

TB Gamma by LEPD

SI CLIENT: HANFORD

AnalyseDate: 06/16/2008

Batch: 8134494

SEQ Batch, Test: None

pCi/L

Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On/Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 KM5GM-1-AC-C		3988.50g/in	ISD0849			100min	24	0712	06/05	
J8E130000-494-LCS			04/22/08							
04/29/2008 08:00										

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

Comments:

All Clients for Batch:

394868, Pacific Northwest National Laboratory

Pacific Northwest National Lab, SS, 57671

KME2Q1AA-SAMP Constituent List:

I-129	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:
KM5GM1AA-BLK:					
I-129	RDL: 1.00E+00	pCi/L	LCL:	UCL:	RPD:
KM5GM1AC-LCS:					
I-129	RDL: 5	pCi/L	LCL: 70	UCL: 130	RPD: 20
KME2Q1AA-SAMP Calc Info:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B	
KM5GM1AA-BLK:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B	
KM5GM1AC-LCS:					
Uncert Level (#s): 2	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B	

Approved By

Date:

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 8

Prep\_SamplePrep v4.8.32

Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added



6/9/2008 7:30:03 AM

## ICOC Fraction Transfer/Status Report

ByDate: 6/10/2007, 6/14/2008, Batch: '8134494', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134494</b>				
AC	Rev1C	LucasD	6/2/2008 12:14:44 PM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		LucasD	InPrep	6/2/2008 12:14:44 PM
SC		BostedD	InPrep2	6/5/2008 7:37:55 AM
SC		BostedD	Prep2C	6/5/2008 5:07:42 PM
SC		DAWKINSO	InCnt1	6/5/2008 6:08:43 PM
SC		BlackCL	CalcC	6/6/2008 7:36:48 AM
SC		nortonj	Rev1C	6/9/2008 7:29:56 AM
AC		BostedD	6/5/2008 7:37:55 AM	ICOC_RADCALC v4.8.32
AC		BostedD	6/5/2008 5:07:42 PM	RICH-RC-5015 Revision 6
AC		DAWKINSO	6/5/2008 6:08:43 PM	RICHRC5025 REVISION 4
AC		BlackCL	6/6/2008 7:36:48 AM	RICHRC5025 REVISION 4
AC		nortonj	6/9/2008 7:29:56 AM	RICH-RD-0007 REVISION 6
				RICH-RD-0007 REVISION 6
				RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 6  
ICOCFractions v4.8.33

Balance Id:1120482733

BN I-129 Prp/SepRC5025  
TB Gamma by LEPD  
5I CLIENT: HANFORD

51 CLIENT: HANFORD

pCi/L

**PM, Quote: SS , 57671**





Prep Tech: ,HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	--------------	--------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

1 KMINDL-1-AE  
500.10g.in  
ITA7289  
05/21/08  
J8E070113-3-SAMP  
35.9 100 6/6/12  
Alpha: 1.03E-03 uCi/Sa  
Beta: 7.81E-04 uCi/Sa  
Containers: 6  
AmiRec: 2X500MLP 2XLP 2X4LP  
05/05/2008 12:34

2 KMNDL-1-AH-X	500.10g.in	ITAT290	36.9	12	0856	6/6/55
JBE070113-3-DUP		05/21/08				
05/06/2008 12:34						
AmiRec: 2X500MLP 2XLP 2X4LP						
#Containers: 6						
Alpha: 1.03E-03 uCi/Sa						
Beta: -7.81E-04 uCi/Sa						

[illegible]

4 KM5GK-1-AC-C	500.20g.in	ISB0284	05/06/08	36.8	LI	05/08	Alpha:	Scr:	Rela:
 IJBE130000-493-LCS	 Ami/Rec:	 #Containers: 1	 05/06/2008 12:34						

Date 6/3/08

**All Clients for Batch:**

Pacific Northwest National Lab, SS, 57671

**CONDL1AE-SAMP Constituent List:**

I-129	RDL:5.00E+00	pCi/L	LCL:70	UCL:130	RPD:20
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05GK1AA-BLK:

I-129	RDL:5.00E+00	PCI/L	LCL:	UCL:	RPD:
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MSGK1AC-LCS:

**COND1AE-SAMP Calc Info:**

TAL Richland

Page 1

ISV - Insufficient Volume for Analysis

**WO Cnt: 4**

Prep Sample Prep v4.8.32



6/3/2008 4:33:26 PM

## Sample Preparation/Analysis

Balance Id:1120482733

BN I-129 Prp/SepRC5025  
TB Gamma by LEPD  
SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 06/20/2008

Sep1 DT/Tm Tech:

Batch: 8134493

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

pCi/L

Prep Tech: HarrisD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Decay to SaDt: Y	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
Uncert Level (#s): 2	2	Decay to SaDt: Y	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B					
RM5GK1AA-BLK:											
Uncert Level (#s): 2	2	Decay to SaDt: Y	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B					
RM5GK1AC-LCS:											
Uncert Level (#s): 2	2	Decay to SaDt: Y	Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y	ODRs: B					

Approved By

Date:

TAL Richland  
Richland Wa.Key: In - Initial Amt, fl - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

Page 2

ISV - Insufficient Volume for Analysis

WO Cnt: 4  
Prep\_SamplePrep v4.8.32

6/9/2008 7:43:18 AM

# ICOC Fraction Transfer/Status Report

ByDate: 6/10/2007, 6/14/2008, Batch: '8134493', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134493</b>				
AC	Rev1C	HarrisD	6/3/2008 4:30:09 PM	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		HarrisD	InPrep	6/3/2008 4:30:09 PM
SC		HarrisD	Prep1C	6/3/2008 4:33:27 PM
SC		BostedD	InPrep2	6/5/2008 7:37:41 AM
SC		BostedD	Prep2C	6/5/2008 5:07:51 PM
SC		DAWKINSO	InCnt1	6/5/2008 6:08:37 PM
SC		BlackCL	CalcC	6/6/2008 9:23:26 AM
SC		nortonj	Rev1C	6/9/2008 7:40:13 AM
AC		HarrisD	6/3/2008 4:33:27 PM	
AC		BostedD	6/5/2008 7:37:41 AM	
AC		BostedD	6/5/2008 5:07:51 PM	
AC		DAWKINSO	6/5/2008 6:08:37 PM	
AC		BlackCL	6/6/2008 9:23:26 AM	
AC		nortonj	6/9/2008 7:40:13 AM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 7

ICOCFractions v4.8.33





\*\*\*RE-COUNT REQUEST\*\*\*

DUE DATE 6-19

CUSTOMER PGW

ANALYSIS Tc 99

MATRIX H<sub>2</sub>O

LOT NUMBER JB E 050216, 070113, 070115

SAMPLE DELIVERY GROUP W05392

OLD BATCH NUMBER 8134500

NEW BATCH NUMBER 8155308

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) ALL	384868	TSIE OUT
2)		
3)		
4)		SHAKE & RE-COUNT
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		

RC-126, 12/07, Rev 5

06/16/2008 11:36:49 AM

# Sample Preparation/Analysis

Balance Id:

FP Tc-99 Prp/SepRC5065  
S5 Technetium-99 by Liquid Scint  
SI CLIENT: HANFORD

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

PM, Quote: SS, 57671

pCi/L

WATER

Batch: 8155308  
SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
<b>1 KMK2R-2-AF</b>										
J8E050216-1-SAMP										
05/05/2008 11:33				AmiRec: 20ML,500MLP,4XLP				Alpha: -2.37E-04 uCi/Sa		Beta: -1.29E-04 uCi/Sa
<b>2 KMNDL-2-AF</b>										
J8E070113-3-SAMP										
05/05/2008 12:34				AmiRec: 2X500MLP,2XLP,2X4LP				Alpha: 1.03E-03 uCi/Sa		Beta: -7.81E-04 uCi/Sa
<b>3 KMNEL-2-AF</b>										
J8E070115-1-SAMP										
05/06/2008 11:03				AmiRec: VIAL20,500MLP,4XLP				Alpha: 1.17E-04 uCi/Sa		Beta: -1.21E-04 uCi/Sa
<b>4 KMNE3-2-AF</b>										
J8E070115-2-SAMP										
05/06/2008 07:30				AmiRec: VIAL20,500MLP,4XLP				Alpha: -3.53E-04 uCi/Sa		Beta: 2.26E-04 uCi/Sa
<b>5 KMNE3-2-AG-X</b>										
J8E070115-2-DUP										
05/06/2008 07:30				AmiRec: VIAL20,500MLP,4XLP				Alpha: -3.53E-04 uCi/Sa		Beta: 2.26E-04 uCi/Sa
<b>6 KMNE6-2-AF</b>										
J8E070115-3-SAMP										
05/06/2008 10:25				AmiRec: VIAL20,500MLP,6XLP				Alpha: -1.58E-04 uCi/Sa		Beta: -3.19E-05 uCi/Sa
<b>7 KMNE6-2-AG-S</b>										
J8E070115-3-MS										
05/06/2008 10:25				AmiRec: VIAL20,500MLP,6XLP				Alpha: -1.58E-04 uCi/Sa		Beta: -3.19E-05 uCi/Sa



16/3/2008 11:36:50 AM

# Sample Preparation/Analysis

Balance Id:

FP Tc-99 Prp/SepRC5065

Pipet #:

S5 Technetium-99 by Liquid Scint

SI CLIENT: HANFORD

AnalyDueDate: 06/19/2008

Batch: 8155308

pC/L

SEO Batch, Test: None

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
------------------------------	-----------------	----------------------	--------------------------	-----------------------------	---------------------	----------------	-------------	------------------------------	-----------------------	-----------

8 KM5HD-2-AA-B

J8E130000-500-BLK

05/06/2008 07:30

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

9 KM5HD-2-AC-C

J8E130000-500-LCS

05/06/2008 07:30

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

10 KM5HD-2-AD-B

J8E130000-500-BLK

05/06/2008 07:30

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS , 57671

KMK2R2AF-SAMP Constituent List:

KME62AG-MS:

KM5HD2AA-BLK:

KM5HD2AC-LCS:

KM5HD2AD-BLK:

KMK2R2AF-SAMP Calc Info:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Blk Subt.: N

Sci.Not.: Y

ODRs: B

TAL Richland

Richland Wa.

Key: In - Initial Amt.

fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 2

ISV - Insufficient Volume for Analysis

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 10

ICOC v4.8.32

# Sample Preparation/Analysis

06/3/2008 11:36:50 AM

Balance Id:

FP Tc-99 Prp/SepRC5065  
S5 Technetium-99 by Liquid Scint  
5I CLIENT: HANFORD

Pipet #:

AnalyDueDate: 06/19/2008

Sep1 DT/Tm Tech:

Batch: 8155308

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

pCi/L

Prep Tech:

Work Order, Lot, Sample Date	Total Amt /Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
KMSHD2AA-BLK:										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y		ODRs: B				
KMSHD2AC-LCS:										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y		ODRs: B				
KMSHD2AD-BLK:										
Uncert Level (#s): 2		Decay to SaDt: Y	Blk Subt.: N	Sci. Not.: Y		ODRs: B				

Approved By \_\_\_\_\_ Date: \_\_\_\_\_



6/6/2008 10:49:48 AM

## ICOC Fraction Transfer/Status Report

ByDate: 5/7/2008, 6/7/2008, Batch: '8134500', User: \*All Order by BatchNbr,WorkOrderNbr,DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134500</b>				
AC	InCnt1	LucasD	5/28/2008 10:24:25	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		LucasD	InPrep	5/28/2008 10:24:25 AM
SC		Barcotl	InPrep	6/2/2008 4:00:15 PM
SC		Barcotl	Prep1C	6/2/2008 4:00:38 PM
SC		DAWKINSO	InCnt1	6/2/2008 4:30:25 PM
AC		Barcotl		6/2/2008 4:00:15 PM
AC		Barcotl		6/2/2008 4:00:38 PM
AC		DAWKINSO		6/2/2008 4:30:25 PM

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 4  
ICOCFractions v4.8.32

# Sample Preparation/Analysis

5/28/2008 10:46:42 AM Balance Id: 1120373922  
 384868, Pacific Northwest National Laboratory AM Tc-99 Prp/SepRC5078  
 Pacific Northwest National Lab S5 Technetium-99 by Liquid Scint  
 51 CLIENT: HANFORD  
 AnalyDueDate: 06/19/2008 PM, Quote: SS, 57671  
 Batch: 8134499 WATER pCi/L 9/1/08  
 Sep1 DT/Tm Tech: Sep2 DT/Tm Tech: Prep Tech: LucasD  
 Sep1 DT/Tm Tech: Sep2 DT/Tm Tech: Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KMK36-1-AA		125.52g.in						
J8E050219-1-SAMP								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 5				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa
2 KMK36-1-AE-S		125.14g.in						
J8E050219-1-MS								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 5				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa
3 KMK36-1-AF-X		125.45g.in						
J8E050219-1-DUP								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 5				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa
4 KM5HC-1-AA-B		125.18g.in						
J8E130000-499-BLK								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 1				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa
5 KM5HC-1-AC-C		125.59g.in						
J8E130000-499-LCS								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 1				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa
6 KM5HC-1-AD-BN								
J8E130000-499-BLK								
05/05/2008 11:01		AmtRec: 20ML, 500MLP, 3XLP	#Containers: 1				Alpha: 3.18E-04 uCi/Sa	Beta: -1.00E-04 uCi/Sa



5/28/2008 10:46:43 AM

## Sample Preparation/Analysis

Balance Id:

AM Tc-99 Prp/SepRC5078

Pipet #:

S5 Technetium-99 by Liquid Scint

AnalyDueDate: 06/19/2008

51 CLIENT: HANFORD

Sep1 DT/Tm Tech:

Batch: 8134499

pCi/L

Sep2 DT/Tm Tech:

SEO Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

KMK361AA-SAMP Constituent List:

Tc-99 RDL:1.50E+01 pCi/L LCL:70 UCL:130 RPD:20

KMK361AE-MS Constituent List:

KMSHC1AA-BLK:

Tc-99 RDL:1.50E+01 pCi/L LCL: UCL: RPD:

KMSHC1AC-LCS:

Tc-99 RDL:15 pCi/L LCL:70 UCL:130 RPD:20

KMSHC1AD-IBLK:

Tc-99 RDL:1.50E+01 pCi/L LCL: UCL: RPD:

KMK361AA-SAMP Calc Info:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KMK361AE-MS Calc Info:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KMSHC1AA-BLK:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KMSHC1AC-LCS:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

KMSHC1AD-IBLK:

Uncert Level (#s): 2 Decay to Sadt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By

Date:

TAL Richland  
Richland Wa.Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 6

Prep\_SamplePrep v4.8.32

6/13/2008 2:34:45 PM

## ICOC Fraction Transfer/Status Report

ByDate: 6/14/2007, 6/18/2008, Batch: '8134499', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8134499				
AC	Rev1C	LucasD	5/28/2008 10:39:50	
SC		wagarr	IsBatched 5/14/2008 10:29:16 AM	ICOC_RADCALC v4.8.32
SC		LucasD	InPrep 5/28/2008 10:39:50 AM	RICH-RC-5016 Revision 7
SC		Barcotl	InPrep2 6/12/2008 9:07:20 AM	RICH-RC-5078 REVISION 4
SC		Barcotl	Prep2C 6/12/2008 9:07:33 AM	RICH-RC-5078 REVISION 4
SC		ClarkR	InCnt1 6/12/2008 9:14:09 AM	RICH-RD-0001 REVISION 4
SC		BlackCL	CalcC 6/13/2008 6:13:54 AM	RICH-RD-0001 REVISION 4
SC		nortonj	Rev1C 6/13/2008 2:34:38 PM	RICH-RC-0002 REV 8
AC		Barcotl	6/12/2008 9:07:20	
AC		Barcotl	6/12/2008 9:07:33	
AC		ClarkR	6/12/2008 9:14:09	
AC		BlackCL	6/13/2008 6:13:54	
AC		nortonj	6/13/2008 2:34:38 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.33



5/14/2008 10:26:52 AM

384668, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

### Sample Preparation/Analysis

AR H-3 Pp/SeptC5007  
S6 Tritium by Liquid Scint  
51 CLIENT: HANFORD

Batch: 8134497

SEQ Batch, Test: None

PM, Quote: SS, 57671

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Work Order, Lot, Sample Date Time

Total Amt/Unit

Initial Aliquot Amt/Unit

QC Tracer Prep Date

Count Time Min

Detector Id

Count On | Off (24hr) Circle

CR Analyst, Init/Date

Comments:

1 KME2V-1-AA

J8E010329-1-SAMP

05/01/2008 09:16

#Containers: 3

Scr:

Alpha:

Beta:

2 KME20-1-AA

J8E010329-2-SAMP

05/01/2008 10:38

#Containers: 3

Scr:

Alpha:

Beta:

3 KME22-1-AA

J8E010329-3-SAMP

05/01/2008 11:40

#Containers: 3

Scr:

Alpha:

Beta:

4 KME27-1-AA

J8E010329-4-SAMP

05/01/2008 12:23

#Containers: 3

Scr:

Alpha:

Beta:

5 KMKW3-1-AC

J8E050200-1-SAMP

05/05/2008 10:15

#Containers: 7

Scr:

Alpha:

Beta:

6 KMK2R-1-AA

J8E050216-1-SAMP

05/05/2008 11:33

#Containers: 6

Scr:

Alpha:

Beta:

7 KMK21-1-AA

J8E050216-2-SAMP

05/05/2008 12:24

#Containers: 3

Scr:

Alpha:

Beta:

TAL Richland

Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Cnt: 7

ICOC v4.8.32

5/14/2008 10:26:52 AM

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

## Sample Preparation/Analysis

AR H-3 Prp/SepRC5007  
S6 Tritium by Liquid Scint  
SI CLIENT: HANFORD

AnalyDueDate: 06/16/2008

Batch: 8134497 WATER pCi/L

PM, Quote: SS, 57671

SEQ Batch, Test: None

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 KMK25-1-AA								
J8E050216-3-SAMP								
05/05/2008 11:01								
9 KMK3R-1-AA								
J8E050216-4-SAMP								
05/05/2008 13:07								
10 KMKNC8-1-AA								
J8E070111-1-SAMP								
05/05/2008 12:46								
11 KMKNC8-1-AE-X								
J8E070111-1-DUP								
05/06/2008 12:46								
12 KMKNDL-1-AA								
J8E070113-3-SAMP								
05/06/2008 12:34								
13 KMKNEL-1-AA								
J8E070115-1-SAMP								
05/06/2008 11:03								
14 KMKNE3-1-AA								
J8E070115-2-SAMP								
05/06/2008 07:30								

TAL Richland  
Richland Wa.Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 14

ICOC v4.8.32



5/14/2008 10:26:52 AM

## Sample Preparation/Analysis

AR H-3 Prp/SepRC5007  
S6 Tritium by Liquid Scint  
51 CLIENT: HANFORD

Balance Id:

Pipet #:

AnalyDueDate: 06/16/2008

Sep1 DT/Tm Tech:

Batch: 8134497

pCi/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 KM5GD-1-AA-B								
J8E130000-497-BLK								
05/06/2008 12:46								
16 KM5GD-1-AC-C								
J8E130000-497-LCS								
05/06/2008 12:46								
17 KM5GD-1-AD-B								
J8E130000-497-BLK								
05/06/2008 12:46								
18 KM5GD-1-AE-C								
J8E130000-497-LCS								
05/06/2008 12:46								
19 KM5GD-1-AF-B								
J8E130000-497-BLK								
05/06/2008 12:46								
20 KM5GD-1-AG-B								
J8E130000-497-BLK								
05/06/2008 12:46								
21 KM5GD-1-AH-B								
J8E130000-497-BLK								
05/06/2008 12:46								

TAL Richland  
Richland Wa.

ISV - Insufficient Volume for Analysis

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WO Cnt: 21

ICOC v4.8.32

5/14/2008 10:26:53 AM

## Sample Preparation/Analysis

AR H-3 Prp/SepRC5007  
S6 Tritium by Liquid Scint  
51 CLIENT: HANFORD

Balance Id:

Pipet #:

Analyte Due Date: 06/16/2008

Sep1 DT/Tm Tech:

Batch: 8134497  
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

pCi/L

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

KMS2V1AA-SAMP Constituent List:

H-3 RDL:400 PC1/L LCL:70 UCL:130 RPD:20

KMSG01AA-BLK:

KMSG01AC-LCS:

KMSG01AD-BLK:

KMSG01AE-LCS:

KMSG01AF-BLK:

KMSG01AG-BLK:

KMSG01AH-BLK:

KMS2V1AA-SAMP Calc Info:

Uncert Level (#): 2

KMSG01AA-BLK:

Uncert Level (#): 2

KMSG01AC-LCS:

Uncert Level (#): 2

KMSG01AD-BLK:

Uncert Level (#): 2

KMSG01AE-LCS:

Uncert Level (#): 2

KMSG01AF-BLK:

Uncert Level (#): 2

KMSG01AG-BLK:

Uncert Level (#): 2

KMSG01AH-BLK:

Uncert Level (#): 2

Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B
Decay to SaDt: Y	Blk Subt.: N	Sci. Mot.: Y	ODRs: B

TAL Richland

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

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WO Cnt: 21

Richland Wa.

pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ICOC v4.8.32



5/14/2008 10:26:53 AM

### Sample Preparation/Analysis

AR H-3 Pp/SepRC5007  
S6 Tritium by Liquid Scint  
SI CLIENT: HANFORD

Balance Id:

Pipet #:

AnalyDueDate: 06/16/2008

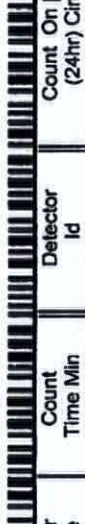
Batch: 8134497  
SEQ Batch, Test: None

pCi/L

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:



Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
--------------------------------------	-------------------	-----------------------------	------------------------	-------------------	----------------	---------------------------------	--------------------------	-----------

Approved By

Date:

TAL Richland  
Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

Page 5

WO Cnt: 21

ICOC v4.8.32

6/6/2008 10:22:13 AM

## ICOC Fraction Transfer/Status Report

ByDate: 6/7/2007, 6/11/2008, Batch: '8134497', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134497</b>				
AC	Rev1C	McDowellID	5/28/2008 10:25:02	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		McDowellID	InSep1	5/28/2008 10:25:02 AM
SC		McDowellID	Sep1C	5/29/2008 1:12:07 PM
SC		DAWKINSO	InCnt1	5/29/2008 3:55:47 PM
SC		ClarkR	CalcC	5/31/2008 9:05:44 AM
SC		nortonj	Rev1C	6/6/2008 10:21:42 AM
AC		McDowellID	5/29/2008 1:12:07 PM	ICOC_RADCALC v4.8.32
AC		DAWKINSO	5/29/2008 3:55:47 PM	RICH-RC-5007 REVISION 6
AC		ClarkR	5/31/2008 9:05:44	RICH-RC-5007 REVISION 6
AC		nortonj	6/6/2008 10:21:42	RICH-RD-0001 REVISION 4
				RICH-RD-0001 REVISION 4
				RICH-RC-0002 REV 8

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 5  
ICOCFractions v4.8.33





\*\*\*RE-ANALYSIS REQUEST\*\*\*

DUE DATE 6-19

CUSTOMER PGW

ANALYSIS C-14

MATRIX H<sub>2</sub>O

LOT NUMBER J8E050216, 070111, 070115

SAMPLE DELIVERY GROUP WO 5392

OLD BATCH NUMBER 813 4481 / 815 7505

NEW BATCH NUMBER 8161360

LAB SAMPLE ID	CLIENT ID	REASON FOR REQUEST & ANALYSIS COMMENTS
1) ALL	384868	DUPLICATE WAS OOL
2)		
3)		
4)		
5)		
6)		
7)		
8)		
9)		
10)		
11)		
12)		
13)		
14)		
15)		
16)		
17)		
18)		
19)		
20)		
LAB QC ID		Assigned with new batch.

RC-048, 12/07, Rev 8

### Sample Preparation/Analysis

Balance Id: *N/A*

Pipet #:

Sep1 DT/Tr Tech: C-10-2828

**Sep2 DT/Tm Tech:**

**PM, Quote: SS , 57671**

PCI/L

## WATER

SEQ Batch, Test: None

**Prep Tech:**

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
<b>1 KMK2R-2-AE</b>								
J8E050216-1-SAMP								
05/05/2008 11:33		AmtRec: 20ML, 500MLP, 4XLP	#Containers: 6			Scr: Alpha: -2.37E-04 uCi/Sa		Beta: -1.29E-04 uCi/Sa
<b>2 KMNC8-2-AC</b>								
J8E070111-1-SAMP								
05/06/2008 12:46		AmtRec: VIAL20, 6XLP	#Containers: 7			Scr: Alpha: 3.96E-04 uCi/Sa		Beta: 3.68E-05 uCi/Sa
<b>3 KMNEL-3-AE</b>								
J8E070115-1-SAMP								
05/06/2008 11:03		AmtRec: VIAL20, 500MLP, 4XLP	#Containers: 6			Scr: Alpha: 1.17E-04 uCi/Sa		Beta: -1.21E-04 uCi/Sa
<b>4 KMNEL-3-AG-X</b>								
J8E070115-1-DUP								
05/06/2008 11:03		AmtRec: VIAL20, 500MLP, 4XLP	#Containers: 6			Scr: Alpha: 1.17E-04 uCi/Sa		Beta: -1.21E-04 uCi/Sa
<b>5 KMNE3-2-AE</b>								
J8E070115-2-SAMP								
05/06/2008 07:30		AmtRec: VIAL20, 500MLP, 4XLP	#Containers: 6			Scr: Alpha: -3.53E-04 uCi/Sa		Beta: 2.26E-04 uCi/Sa
<b>6 KMNE6-2-AD</b>								
J8E070115-3-SAMP								
05/06/2008 10:25		AmtRec: VIAL20, 500MLP, 6XLP	#Containers: 8			Scr: Alpha: -1.58E-04 uCi/Sa		Beta: -3.19E-05 uCi/Sa
<b>7 KPLMH-1-AA-B</b>								
J8F090000-360-BLK								
05/05/2008 11:33		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

TAL Richland

ISV - Insufficient Volume for Analysis

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**WO Cnt: 7**

ICOC v4.8.32



06/19/2008 2:43:29 PM

# Sample Preparation/Analysis

Balance Id: U/A

Pipet #:

5S C-14 Prp/SepRC5022  
S3 Carbon-14 by Liquid Scint  
5I CLIENT: HANFORD

AnalyDueDate: 06/19/2008

Sep1 DT/Tm Tech: 6-10-08 JBR

Batch: 8161360  
SEO Batch, Test: None

Sep2 DT/Tm Tech:

pCi/L

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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8 KPLMH1-AC-C

J8F090000-360-LCS

05/05/2008 11:33

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

9 KPLMH1-AD-BN

J8F090000-360-IBLK

05/05/2008 11:33

#Containers: 1

AmtRec:

Scr:

Alpha:

Beta:

Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

KMK2R2AE-SAMP Constituent List:

KPLMH1AA-BLK:

KPLMH1AC-LCS:

KPLMH1AD-IBLK:

KMK2R2AE-SAMP Calc Info:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

KPLMH1AA-BLK:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

KPLMH1AC-LCS:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

KPLMH1AD-IBLK:

Uncert Level (#s): 2

Decay to SaDt: Y

Blk Subt.: N

Sci.Not.: Y

ODRs: B

Approved By

Date:

TAL Richland

Richland Wa

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2

Page 2

ISV - Insufficient Volume for Analysis  
pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

WO Ont: 9

ICOC v4.8.32

6/17/2008 1:34:00 PM

## ICOC Fraction Transfer/Status Report

ByDate: 6/18/2007, 6/22/2008, Batch: '8161360', User: 'ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
8161360				
AC	Rev1C	McDowellD	6/10/2008 8:26:10	
SC		nortonj	IsBatched 6/9/2008 2:43:26 PM	ICOC_RADCALC v4.8.32
SC		McDowellD	InSep1 6/10/2008 8:26:10 AM	RICH-RC-5022 REVISION 3
SC		McDowellD	Sep1C 6/16/2008 1:53:29 PM	RICH-RC-5022 REVISION 3
SC		BlackCL	InCnt1 6/16/2008 2:09:14 PM	RICH-RD-0001 REVISION 4
SC		BlackCL	CalcC 6/17/2008 7:08:22 AM	RICH-RD-0001 REVISION 4
SC		nortonj	Rev1C 6/17/2008 1:33:52 PM	RICH-RC-0002 REV 8
AC		McDowellD	6/16/2008 1:53:29 PM	
AC		BlackCL	6/16/2008 2:09:14 PM	
AC		BlackCL	6/17/2008 7:08:22	
AC		nortonj	6/17/2008 1:33:52 PM	

AC: Accepting Entry; SC: Status Change

TAL Richland  
Richland Wa.

Page 1

Grp Rec Cnt: 5  
ICOCFractions v4.8.33



6/20/2008 2:35:41 PM

## Sample Preparation/Analysis

Balance Id:1120482733

384868, Pacific Northwest National Laboratory ,  
Pacific Northwest National Lab  
DH UNat\_Laser PrpRC5015  
SS Total Uranium by KPA  
SI CLIENT: HANFORD

AnalyteDueDate: 06/19/2008

Batch: 8134496 WATER ug/L PM, Quote: SS , 57671

SEQ Batch, Test: None All Tests: 8134496 DHSS, 8134499 AMS5,

Prep Tech: , LucasD

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KMK36-1-AC		25.70g.in						
J8E050219-1-SAMP								
05/05/2008 11:01								
2 KMK36-1-AD-S		25.80g.in	UNSF-4221					
J8E050219-1-MS			05/22/08,pd					
05/05/2008 11:01			05/01/08					
3 KMNDL-1-AG		25.80g.in						
J8E070113-3-SAMP								
05/06/2008 12:34								
4 KMNDL-1-AJ-X		25.80g.in						
J8E070113-3-DUP								
05/06/2008 12:34								
5 KM5GV-1-AA-B		25.00g.in						
J8E130000-496-BLK								
05/06/2008 12:34								
6 KM5GV-1-AC-C		25.00g.in	UNSF-4222					
J8E130000-496-LCS			05/22/08,pd					
05/06/2008 12:34			05/01/08					
7 KM5GV-1-AD-C		25.20g.in	UNSC2514					
J8E130000-496-LCS			05/22/08,pd					
05/06/2008 12:34			05/01/08					
TAL Richland	Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2	Page 1	ISV - Insufficient Volume for Analysis	WO Cnt: 7				
Richland Wa.	pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added			ICOC v4.8.32				

TESTAMERICA

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6/20/2008 2:35:41 PM

## Sample Preparation/Analysis

Balance Id:1120482733

DH UNat Laser PrpRC5015  
 SS Total Uranium by KPA  
 SI CLIENT: HANFORD

Pipet #:

AnalyDueDate: 06/19/2008

Sep1 DT/Tm Tech:

Batch: 8134496

ug/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: LucasD

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

RMK361AC-SAMP Constituent List:

Uranium RDL:1.44E-01 ug/L LCL: UCL: RPD:

RMK361AD-MS Constituent List:

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

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Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

Uranium RDL:0.144343 ug/L LCL:70 UCL:130 RPD:20

TAL Richland Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 2  
 Richland Wa. pd - Prep Dt, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 7

ICOC v4.8.32



6/20/2008 10:11:11 AM

# ICOC Fraction Transfer/Status Report

ByDate: 6/21/2007, 6/25/2008, Batch: '8134496', User: \*ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
<b>8134496</b>				
AC	Rev1C	LucasD	6/2/2008 11:07:11	
SC		wagarr	IsBatched	5/14/2008 10:29:16 AM
SC		LucasD	InPrep	6/2/2008 11:07:11 AM
SC		BockJ	InPrep2	6/11/2008 9:05:15 AM
SC		BockJ	Prep2C	6/12/2008 12:15:20 PM
SC		NelsonT	Cnt1C	6/12/2008 2:39:26 PM
SC		nortonj	Rev1C	6/13/2008 12:56:20 PM
AC		BockJ	6/11/2008 9:05:15	
AC		BockJ	6/12/2008 12:15:20	
AC		NelsonT	6/12/2008 2:39:26 PM	
AC		nortonj	6/13/2008 12:56:20	

AC: Accepting Entry; SC: Status Change

TAL Richland

Richland Wa.

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Grp Rec Cnt: 5

ICOCFractions v4.8.33

5/5/2008 4:08:14 PM

384868, Pacific Northwest National Laboratory  
Pacific Northwest National Lab

# Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION  
EA Chromium, Hexavalent (7196A)  
51 CLIENT: HANFORD

Batch: 8126529 WATER mg/L

SEQ Batch, Test: None All Tests: 8126529 88EA,

PM, Quote: SS, 57671

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Balance Id:

Pipet #:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst Init/Date	Comments:
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1 KMKW3-1-AA

J8E050200-1-SAMP

05/05/2008 10:15  
AmiRec: 20ML, 500G, 5XLP #Containers: 7

Beta:

Alpha:

Scr:

2 KMKW3-1-AF-S

J8E050200-1-MS

05/05/2008 10:15  
AmiRec: 20ML, 500G, 5XLP #Containers: 7

Beta:

Alpha:

Scr:

3 KMKW3-1-AG-D

J8E050200-1-MSD

05/05/2008 10:15  
AmiRec: 20ML, 500G, 5XLP #Containers: 7

Beta:

Alpha:

Scr:

4 KMKW3-1-AH-X

J8E050200-1-DUP

05/05/2008 10:15  
AmiRec: 20ML, 500G, 5XLP #Containers: 7

Beta:

Alpha:

Scr:

5 KMK1N-1-AA-B

J8E050000-529-BLK

05/05/2008 10:15  
AmiRec: #Containers: 1

Beta:

Alpha:

Scr:

6 KMK1N-1-AC-C

J8E050000-529-LCS

05/05/2008 10:15  
AmiRec: #Containers: 1

Beta:

Alpha:

Scr:

TAL Richland

Richland Wa

Key: In - Initial Amt,

fi - Final Amt,

di - Diluted Amt, s1 - Sep1, s2 - Sep2  
pd - Prep Dt, r - Reference Dt, ec - Enrichment Cell, ct - Cocktail Added

Page 1

ISV Insufficient Volume for Analysis

WO Cnt: 6

ICOC v4.8.32



5/5/2008 4:08:15 PM

## Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EA Chromium, Hexavalent (7196A)

SI CLIENT: HANFORD

Analyte Due Date: 06/19/2008

Batch: 8126529

SEO Batch, Test: None

mg/L

Balance Id:

Pipet #:

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Int/Date	Comments:
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Comments:

All Clients for Batch:

384868, Pacific Northwest National Laboratory Pacific Northwest National Lab, SS, 57671

K0KW31AA-SAMP Constituent List:

K0KW31AF-MS Constituent List:

K0KW31AG-MSD:

K0K1N1AA-BLK:

K0K1N1AC-LCS:

K0KW31AA-SAMP Calc Info:

Uncert Level (#s): 2

K0KW31AF-MS Calc Info:

Uncert Level (#s): 2

K0KW31AG-MSD:

Uncert Level (#s): 2

K0K1N1AA-BLK:

Uncert Level (#s): 2

K0K1N1AC-LCS:

Uncert Level (#s): 2

Decay to SaDt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Decay to SaDt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Decay to SaDt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Decay to SaDt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Decay to SaDt: Y Blk Subt.: N Sci. Not.: Y ODRs: B

Approved By

Date:

LAL Richland

Key In - Initial Amt.

pd - Prep Dt. - Reference Dt. ec-Enrichment Cell, ct-Cocktailer Added

Page:2

ISV Insufficient Volume for Analysis

WO Cnt: 6

ICOC v4.8.32